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IN THE

Supreme Court of the United States

October Term, 1974

No. 74-1016

LEONARD R. KAHN,

Petitioner,

vs.

DYNAMICS CORPORATION OF AMERICA,

Respondent.

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

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To the Honorable Chief Justice and Associate Justices of the Supreme Court of the United States:

Your Petitioner, Leonard R. Kahn (Plaintiff and Appellant below), acting *pro se*, respectfully prays that a Writ of Certiorari issue to review the judgment dated December 10, 1974 of the U.S. Court of Appeals for the Second Circuit in the above action [1], rehearing denied January 9, 1975, except with modification of opinion, affirming the decision of the U.S. District Court for the Southern District of New York.

Reference to the printed Appendix will be designated by (JA).

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1. The Trial Court Judge was the Honorable Charles H. Tenney of the Southern District of New York.
The Opinion of the Court of Appeals was written by the Honorable Harold R. Tyler, District Judge sitting by designation also from the Southern District of New York.

OPINIONS BELOW

The opinion of the Court of Appeals and the denial of a petition, except with modification of opinion not yet reported, and the opinion rendered by the District Court (367 F. Supp. 63) appear in the Appendix hereto.

JURISDICTION

The jurisdiction of this Court is invoked under 28 U.S.C. Sec. 1254(1). The jurisdiction of the U.S. District Court was based on 28 U.S.C. 1338. A timely motion for a stay was filed on January 16, 1975 and granted on January 30, 1975.

QUESTIONS PRESENTED

1. If there has been no factual inquiry and specific finding of the level "of ordinary skill in the pertinent art" as laid down by the Supreme Court in *Graham* v. *Deere*, 383 US 1, may the patentee be used as the standard of "ordinary skill" in determining obviousness particularly when the patentee has been determined to have "outstanding and extraordinary" qualifications by his professional peers?

(Argued post p. 7)

2. Under 35 U.S.C 285, what measure of proof is required to establish bad faith to support the award of attorney fees and is such an award a violation of due process, especially if the bad faith findings are based on:

a) a document not in evidence,
b) a violation of a formal stipulation, and
c) a manifest error in fact?

(Argued post p. 15)

3. Is the requirement for due process met when the Trial Court finds facts conflicting with a formal stipulation, still in effect, and bases findings of non-infringement and bad faith on said facts?

(Argued post pp. 12, 15)

4. Does the late claiming doctrine as laid down by the Supreme Court in *Muncie Gear* v. *Outboard Marine*, 315 US 759, apply to claims "which indeed may be more specific and limited than those originally presented" and is it "immaterial to the defense of late claiming whether or not the claims in suit were supported by the application as originally filed"?

(Argued post p. 11)

5. Is the effect of the doctrine of the presumption of validity in 35 U.S.C. 282 destroyed if a Court finds that:

> "Unfortunately for Kahn there is no evidence that the patent examiner knew of the Ohl patent or that it was called to his attention by Kahn. Therefore, the presumption of validity accorded a patent granted in light of prior art is inapplicable."

when the Court ignores uncontested evidence that the patent examiner cited to Kahn the Ohl patent, its number, issuance date, and technical description?

(Argued post pp. 9, 15)

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

Since the provisions involved are lengthy, the following is a list of citations and the verbatim text is provided in the Appendix:

1. U.S. Constitution Article 1 Section 8, Para. 8.
2. U.S. Constitution, Fifth Amendment
3. 35 U.S.C. Sections 102, 103, 120, 154, 282, 285.

STATEMENT

A patent controversy arose between Your Petitioner, Kahn [2], and Dynamics Corporation of America (DCA), Defendant below, both of New York, and Kahn filed a suit in the U.S. District Court for the Southern District of New York.

The District Court ruled the patent was invalid, was not infringed, and granted attorney fees. The Court of Appeals affirmed and denied petition for rehearing, but modified the opinion. Kahn timely requested a stay to file a Petition for a Writ of Certiorari on January 16, 1975.

The patent in question, 3,030,503 (the '503 patent) discloses a means for reducing the deleterious effects of fading of radio signals. This was one of the first problems noted by early experimenters in long distance radio communications.

When a signal fades, it is relatively simple to increase the "gain" of the radio receivers so as to maintain the proper signal level or loudness. Unfortunately, noise (hiss and static) accompanies all signals, no matter whether the signals be electrical, acoustical, biological, etc. Therefore, during fades the relative strength between the signal and the noise (the signal-to-noise ratio) is degraded and the voice or music signal has more hiss and static, and teletypes print errors. The problem of poor signal-to-noise ratio is one of the most basic problems in science.

In 1927, a system called "Diversity Reception" was introduced to alleviate the fading problem. In its simplest form, diversity systems uses a multiplicity of radio antennas which fade "diversely". That is, the fading at one antenna location is not in time synchronism with the fading at the second location, and a better overall signal can be achieved by intelligent use of the two signals. After some 27 years of intensive experimentation, and after considering many inventions (*including most of the well known*

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2. This Petition is being filed *pro se*. Your Petitioner is not an attorney, but recently was registered to practice before the Patent Office in patent cases as a Patent Agent and has intimate knowledge of the facts of this case.
In the following, in order to avoid confusion, Your Petitioner will refer to himself as "Kahn", although it is foreign to his normal manner of expression.

prior art considered in this case), the industry determined that the best form of diversity was one in which the strongest signal, at any given moment, is selected and the other weaker signals and their noise are switched off. Such "switching systems" were almost exclusively used by the major communications companies by the early 1950's.

This was the state of the art when Kahn, then a young engineer working for a small research organization, Crosby Laboratories, participated in a project for the Army in competition with M.I.T. and Stanford University. It was his invention (in complete disregard of conventional practice) to combine the signals of the various receivers in such a manner as to provide the least noisy signal; i.e., the best signal-to-noise ratio. The conventional switching system discarded the weaker signals but Kahn taught how to use them in an optimum manner.

Simply stated, Kahn's invention provided *optimum signal-to-noise ratio* by placing the signals from the various diversity receivers in phase, so that the signals add and reinforce each other, and *combining or blending the signals in accordance with their signal strength ratios squared.* (Thus, the name, "Ratio Squaring". Kahn's system is also called "Optimum Ratio" and "Maximal Ratio" by various authors.) This change in the amount of combining (blending) was achieved by changing the relative gain of the branch receivers connected to the diversity antennas, as a function of the fading situation. Kahn also disclosed in patent '503 that this changing of relative gains for the signals from the different antennas must be done *slowly* so that the signals control the blending, rather than the signal *plus* the more erratic noise sharing in the control. If the gains of the branch receivers were allowed to change *rapidly*, noise and other problems would result [3].

The "Ratio Squaring" system was initially described in the engineering literature in 1954 by Kahn and became the standard in the industry shortly thereafter. It is now

3. The importance of performing this procedure slowly is discussed in the description of the RCA system below.

extensively used by the U.S. Government (which holds a royalty free license [4]), by major communications companies, and by NASA (deep space navigation systems). Researchers from AT&T, RCA, the U.S. Government, and various Universities *have given Kahn credit* for "Ratio Squaring". He has also *licensed* RCA, Northrop, and Western Union.

The importance of the invention is established by the impressive number and quality of papers and books describing this invention and attributing it to Kahn (App. B, 12-22).

An M.I.T. book "Lectures on Communication System Theory", in a detailed analysis of ratio squaring, stated,

> "The advantage of utilizing all of the available signals in order to achieve a better performance than is obtainable from any of the individual channels was pointed out by L.R. Kahn." (Exh. D-P)

Taylor of NASA on Satellite Tracking, wrote:

> "Kahn ... has shown ... that the diversity combiner output SNR is optimum ..." (Exh. P15)

Prof. Bronzi of the University of Rome, in a paper entitled: "Laboratory Experiments of *Kahn Theory of Diversity* Receivers" described tests of Kahn's Ratio Squaring system (Exh. D-FF pp. 193-4, 199). (Emphasis added)

And Dr. Barrow, of the Air Defense Technical Center, The Hague, stated in a paper in the Proceedings of the Institute of Radio Engineers analyzing and establishing the claim of deHaas as the inventor of diversity that:

> "... deHaas can hardly be criticized, however, for failing to take into account in 1927 of some of the properties of random waves. It was not until 1954 that Kahn discussed in this context the possible improvement obtainable by combination". (Exh. P5)

4. The Defense Department states in their general specifications for communications equipment; "Diversity Combiner. A *ratio-squared* diversity combiner shall be provided when the VFCT is used on HF radio channels. The diversity mode shall provide 2 to 3 db improvement over the non-diversity mode in the presence of band-limited Gaussian noise" (Emphasis added) Exh. P33.

Finally, and importantly to the instant case, the Defendant, DCA, while performing a Government contract for Radar Communications Networks met with severe problems in their use of the then conventional "switching" diversity systems (JA 213-215, Exh. P7). DCA was then advised by M.I.T. to follow Kahn's teachings to solve their problem (JA 886, 888-889, 953-954).

DCA then abandoned their "switching" system and went to the equipment disputed here.

REASONS FOR GRANTING A WRIT

Obviousness

(Questions Presented #1 (supra p. 2))

The Patent Act states that, in order to negate patentability, "... the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art ..." (35 USC 103). The Second Circuit Court of Appeals has, in the past, specifically excluded the patentee from the persons referred to in 35 USC 103 stating that:

> "* * * The issue, however, is not what the patentee expected to produce, but what a hypothetical person 'having ordinary skill in the art' would expect to develop if he had thought about the problem."

Shaw v. *E.B. & A.C. Whiting* (1969) 417 F. 2d 1097; 586 (cert. den. (1970) 397 U.S. 1076; rehearing den. 398 U.S. 954).

Nevertheless, the Courts below used Kahn, the patentee, as the standard of obviousness.

Furthermore, Kahn having been awarded more than 30 U.S. Patents, has authored some 20 engineering papers, has acted as technical consultant to a number of major

commercial firms and the U.S. Government, has taught, as an Adjunct Professor of Electrical Engineering, a number of Graduate school courses in this art, has served as Technical Advisor on the United States Delegation to an Agency of the United Nations, and is a Fellow of the Institute of Electrical and Electronic Engineers (a grade of membership awarded only to persons of outstanding and *extraordinary* qualifications), is not one of *ordinary* skill (JA 178-179). Thus, the Appeal Court's statement in determining obviousness:

> "* * * 'the subject matter as a whole would have been obvious at the time the invention was made to a person' such as an electrical engineer like Kahn.* * *" (Opp. 5943)

erred in using Kahn as the "standard" of reference as the man of "ordinary skill in the art".

The Trial Court, *in direct conflict with this Court's ruling in Graham* v. *John Deere, did not make a factual inquiry or finding into* "the level of ordinary skill in the pertinent art". By failing to follow this Court's mandate it reached a decision which is not in conformance with 35 U.S.C. 103 *the trial courts "standard" was Kahn.*

Finally, we reach the basic question, was Kahn's invention obvious to one of ordinary skill in the art. If it indeed were obvious, why did the communications industry have to wait 27 years for Kahn to solve this pressing problem, why did RCA, Western Union and other major firms license Kahn's invention (JA 425-426, 435) and why did leading researchers from Bell Laboratories, M.I.T., RCA, the U.S. Government, and other prestigious domestic and foreign laboratories publicly credit Kahn with the invention (App. B, 12-22)?

Kahn testified to at least six technical reasons why prior attempts, including those at RCA and Bell Laboratories, failed to find the solution to this basic problem (JA

1285-1286). The technical reasons are difficult to understand. Otherwise, these eminent scientists would have solved the problem themselves.

The invention of the '503 patent was not obvious to the best research minds of the period, let alone obvious to men of "ordinary skill".

Anticipation

(Questions Presented #5 (supra p. 3))

In affirming the finding that Kahn's patent was anticipated, the Appeal Court made a significant error of facts. In their opinion they accepted the Trial Court's finding and stated that:

> "* * * Unfortunately for Kahn, there is no evidence that the patent examiner knew of the Ohl Patent or that it was called to his attention by Kahn. Therefore, the presumption of validity accorded a patent granted in light of prior art is inapplicable.* * *" (Op. 5942-5943 App.)

But there is indisputable evidence that the Examiner was aware of the Ohl patent. Oswald patent No. 2,219,749 (Exh. D-Z), the principal reference before the Patent Office and the Trial Court, includes the statement:

> "If it should be desired to effect a greater degree of frequency stability, this may be done in the manner disclosed in *Patent 2,041,855 to R.S. Ohl*, issued May 26, 1936. That is, the filtered carrier received from the transmitting station may be reconditioned and then used for obtaining automatic frequency control of the beating oscillator 20 and synchronization of the local carrier oscillator 30. Or, if desired, in accordance with the disclosure of the *Ohl patent*, the filtered carrier after being reconditioned and amplified may constitute the source of locally applied carrier oscillations in place of the local carrier oscillator 30.* * *" (Page 3, 2nd col., lines 6-20; emphasis added)

Actually, the Examiner brought this very paragraph to Kahn's attention as shown in the Certified Patent Office file (Exh. D-FF, p. 145). The Oswald/Ohl combination, the closest art, found by the Patent Office and the Courts, was fully considered and rejected by the Patent Office. Thus, the presumption of validity is strengthened.

The Oswald "paper patent" (i.e., *a patent never used*) *was giving scant attention by Oswald's direct subordinates at Bell Laboratories engaged in diversity research* (JA 811-812). This patent did not provide sufficient information (such as tube types or any other components) to enable one to build and test it to see if it would work. DCA's expert, Bingley, though thoroughly armed with hindsight, was unable to use the drawing of the Oswald patent to show *anticipation* and was forced to produce a *hypothetical circuit*, which was also never tested. *Furthermore, although Bingley admitted that he had no experience in diversity* (JA 1181, 1202, 1213) he repeatedly contradicted another DCA witness, Polkinghorn, (JA 1154, 1217-1219), *who worked directly for Oswald at the time of Oswald's invention*, and who had written papers and patents on diversity. Nevertheless, as the Appeal Court pointed out the "Trial Court was impressed by the testimony of DCA's expert Bingley" (Opp. 5942) and ignored DCA's witness Polkinghorn's frank authentic testimony describing Oswald's work.

DCA did not offer any testimony to refute Kahn's six reasons (JA 1285-1286) why the Oswald patent was never used, even by his own subordinates, and has remained merely a "paper" concept all these years.

Admittedly, these reasons are highly technical but this is to be expected in this sophisticated art. Fortunately, the U.S. Patent Office is staffed by specialists equipped to understand the most technical aspects of the various arts. Since the Patent Examiners are constantly reviewing patent applications, they are not only specialists in the art, but in the *prior* art. And unlike expert witnesses, who are paid by one side, they can be objective. The Courts have held that the presumption of validity is strengthened if the Patent Examiner considers the closest art, and since the

Patent Examiner was clearly aware of the Oswald/Ohl combination, which the Courts below have determined to be the closest art, the presumption of validity is strong.

Kahn also provided a mathematical analysis based upon a definition of a key word [5] used in the Oswald patent, which was necessary to DCA's use of their *hypothetical* circuit. This analysis, with mathematical certainty, proves that Oswald called for square root combining instead of ratio square combining. Manifestly, there is *no anticipation*. If the Lower Court can completely disregard the official patent office file and its final decision to issue '503, the presumption of validity, stated in 35 USC 282, is destroyed.

Late Claiming

(Questions Presented #4 (supra p. 3))

Claims 15 and 16 were declared invalid because:

> "... no claims of substantially similar scope were presented to the Patent Office ..." "... until more than one year after equipment substantially the same as charged to infringe had been on sale and delivered to customers". (App. D. Crt. Opinion)

Testimony established that the claims were supported by the original application and that these claims were narrower than the claims filed in the original application (JA 657-661). However, the Trial Court introduced a *new* interpretation of the so called "late claiming" doctrine [6] wherein late claiming applies to claims:

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5. This proof is based upon Defendant's definition of the key word in the Oswald patent "proportional". Accepting the DCA definition Oswald taught *square root* combining not *ratio square* combining. For example, when the signals have a 2 to 1 voltage ratio, square root combining would cause a blending of energy by 2 to 1, whereas Kahn taught blending of 16 to 1 ratio (Plaintiff's Reply Brief p. 16)

6. A thorough discussion of Late Claiming is Flocks & Neimark, Is There a Viable Doctrine of Non-Statutory Late Claiming as a Defense in Patent Litigation, 500 J. Pat. Off. Soc'y. 676 et seq (1968).

> " . . . which indeed may be more specific and limited than those originally presented" and it is "... immaterial to defense of late claiming whether or not the claims in suit were supported by the application as originally filed" (App.)

But since the *Patent Office encourages applicants to narrow* the scope of their claims thereby restricting their property rights and since narrowing of claims is widespread, such a remarkable and unprecedented interpretation of the patent law could create a most *serious disruption of the country's existing patent structure.* Other practical problems which may be created by this new doctrine have been commented upon by leading patent law specialists in a discussion of the instant case [7].

It is believed that this Court's consideration and review of this radical departure from prior interpretation of the "late claiming" doctrine is urgently required [8].

Infringement

(Questions Presented #3 (supra p. 2))

As mentioned above, Kahn's "ratio squaring" breakthrough in diversity reception met with approval by Kahn's peers throughout the world. Mack of M.I.T., also one of DCA's witnesses, admitted that Kahn's publication had

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7. PATENT LAW PERSPECTIVES, Donald R. Dunner, James B. Gambrell, Stuart A. White, Irving Kayton, 1974 DEVELOPMENTS, para. A.7 *Late Claiming and New Matter*, Matthew Bender, New York, New York, a copy of which is attached to Kahn's Petition for Rehearing to the Court of Appeals.

8. Even if this new doctrine is accepted, the Appeal Court's affirmation of late claiming cannot be accepted. While concluding on the one hand that Claims 15 and 16 of the Kahn patent was not infringed and that *the DCA system did not operate in the manner taught by Kahn,* the Court on the other hand decided that the claims were made late because the claims were presented "more than one year after equipment substantially the same as they *charged* to infringe had been on sale and delivered to customers". (App.) (Emphasis added)

The inconsistency of such findings; i.e. noninfringement and late claiming *based on the Defendant's equipment,* which supposedly operated in a different manner, is apparent.

"completely changed the direction of my (his) work" (JA 868) and then he and others at M.I.T. asked DCA to use Kahn's ratio squaring system to solve their serious problem (JA 888 to 889).

As discussed below, DCA engineers authored a number of technical papers and patents, describing their use of ratio squaring. Prior to the trial, DCA furnished Kahn *technical books written by DCA engineers for their Government and other customers.* DCA then formally *stipulated* the accuracy of these books.

Nearing the close of the trial, DCA offered an employee witness, Gruber, *who impeached his own technical book*[9] and testified that by recent testing he had determined that DCA did not actually use ratio squaring but ratio sixing or some other high exponential law. Thus, DCA claimed that the branch receivers were controlled to produce an altogether different type of blending than specified in their book. Gruber, DCA's chief engineer (a former student of Kahn) furthermore testified that, although (a) they made such equipment for 15 years, (b) during which time DCA engineered at least four models of the equipment, (c) he and other engineers had written papers and patents describing their equipment, and (d) passed severe Government tests, he first learned how the equipment worked in the "past few weeks". (JA 964) This change in position, in complete disregard of the pretrial stipulation, altered the entire infringement fact pattern and was contrary to numerous other DCA publications.

The District Court, in a footnote, (Footnote 16) dismissed the problem of the formal stipulation, stating that Kahn had selected portions of DCA's books out of context. DCA had originally urged such a finding in their brief. If DCA really believed that an *accurate quotation of the basic diversity specification* is out of context and a clear

9. See Appendix for (a) the final two questions of Gruber's direct testimony impeaching the stipulated book, and (b) the applicable paragraph of the stipulation.

supporting statement describing the *combiner's branch receiver's characteristic* during *non*-extreme conditions (which is the situation 90% of the time) is out of context, why did they devote the last 26 out of a total of 44 pages of direct testimony of their only witness of fact on infringement to lead up to an impeachment of the *very section Kahn cited in the stipulated book*? There is nothing out of context when DCA, in their technical specifications stated:

> "Type of Combining — Optimum ratio baseband combining". (Exh. P24, p.1-8)

(The book issued by DCA for another DCA model, 2600 stated:

> "Type of combining - Post Detection Optimum Ratio . . ." and
>
> "combining — maximal ratio . . .")

The expert witnesses, from *both sides*, agreed that "optimum ratio" and "ratio square" and "maximal ratio" were used interchangeably in the art. (JA 336-337, 978-979, 992-993, 1244-1245 and Exh. D-L p. 1081) The Government purchases equipment on the basis of specifications which must be met.

Kahn prays that this Court treat the formal stipulation as the clearest proof and binding and give the proper weight to DCA's technical book's statement that their diversity equipment uses "*approximate square law characteristics . . . for best signal-to-noise combiner output*" (Exh. P24, p. 4-33) (Emphasis added). DCA books also describe the use of a separate control path incorporating the means Kahn taught for slowing down the speed of change in gain of the branch receivers to change the blending as per the '503 patent. This square law branch receiver gain characteristic, following slow fading, not noise, is the concept first taught by Kahn, accepted by

M.I.T., and used by RCA, GE, Western Union, Raytheon, the Defense Department and NASA [10].

There is infringement. Due process requires that the stipulation be treated as the clearest proof and be absolutely binding.

Attorney Fees

(Questions Presented #2 (supra p. 2))

The complexity of technology has grown exponentially in recent years. Faced with such technology, the Courts are forced to decide technical issues with the help of "expert" testimony. In almost any patent case diametrically opposed testimony is supplied by two sets of "experts" and this testimony, in many instances, is, to say the least, confusing.

Fortunately, the errors made by the Trial Court in finding bad faith in the instant case, can be recognized without a detailed study of the technology. There are *sign posts* which allow this Court to determine which side is correct and if Kahn acted in good faith.

The Trial Court found that Kahn confused the Patent Office and did not inform them of Ohl. *But, as discussed above, the Patent Examiner cited Ohl to Kahn in the course of the patent prosecution as stated in the Certified Patent Office File Wrapper* (Exh. D-FF, pp. 135-145). The examiner carefully considered the Ohl/Oswald combination, the closest art.

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10. The Trial Court also found that one of the differences between DCA's equipment and the system claimed in patent '503 was that DCA's system was a "hybrid" operating as a combiner some of the time and as a switching system at other times. This is a correct finding. DCA's stipulated books confirm the fact. But stipulated book (Exh. P24) says that "between extremes" it follows ". . . the approximate square law characteristic". Thus, the *non-extreme* mode is ratio squaring. A device that infringes even part of the time, infringes. The fact that it does not infringe *during extreme* conditions does not avoid infringement. It is notable that most system operation (about 90%) is inbetween the "extreme" modes.

The Trial Court also found bad faith because Kahn did not bring a well known early (1931) publication, (Peterson, Beverage & Moore) (Exh. P13) of RCA (*one of Kahn's licensees*) to the attention of the Patent Office. *This article is, in fact, not relevant.* Moreover, the certified Patent Office file shows that Kahn's attorney cited a short publication (Kahn Dep. Exh. I), by Moore, one of authors of the RCA article describing his early work and discussing his earlier paper, and *Kahn in citing this publication labelled it an "attack"* (Exh. D-FF pp. 52-53). Actually Kahn cited the Moore article to the Examiner on three separate occasions. It is inconceivable that Kahn would follow such a procedure in an attempt to conceal this classic work.

But more importantly, this early RCA work had nothing to do with "ratio squaring". The above description of the invention stressed that the change in relative gains of the signals during combining (blending) must be performed *slowly*. This excludes *instantaneous* "square law devices" and the '503 patent specifically *warns against their use*. Peterson et al, and *all of the other prior art in this case, except Oswald*, used instantaneous square law devices. Actually, RCA abandoned the square law detector system by the 1940's (Exh. P7) and adopted the "switching system" as did the rest of the industry (JA 867, Exh. P7), because of distortion and noise in square law detectors. (A square law *detector* is inherently noisy in normal service and thus degrades the signal-to-noise ratio in diversity systems. (JA 274, 379-380, 913, 1231-1234). The "bible" of the radio engineering profession, Terman's "Radio Engineering", Second Edition [11] (Exh. P7) *1937*, after describing this RCA system specifically recommended a switching system

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11. Note that the Defendant and the Trial Court cited the First Edition of Terman's book as *prior art* and ignored the Second Edition. As shown above, the later book states that the original system was inferior to switching which, in turn, has since been mathematically and experimentally proven to be inferior to ratio squaring (Exh. D-P, pp. 147-148)

as a "better arrangement that would *avoid the distortion of the square law detectors*". [12] (Emphasis added) (Exh. P18)

Mack of M.I.T., DCA's witness stated that he would be fired "that day" if he used square law detectors for diversity reception. (JA 913)

Kahn, as well as most communications engineers working in this field was, of course, aware of the RCA square law detector system because it was described in the first English language publication on diversity systems. Anyone with the slightest interest in this art knew of the RCA technique and there was no reason for Kahn to cite it to the Patent Examiner, an expert in prior art. Nevertheless, as pointed out above, Kahn, by citing the Moore publication and labeling it an "attack", clearly reminded the examiner of this work. There was no attempt to conceal the RCA system work and it (and all the other diversity systems cited as prior art by DCA using square law detectors) *was not relevant art in any event.*

The Trial Court also erred in finding that Kahn acted in bad faith in commencing this suit.

Prior to commencing this suit, Kahn and his attorney, March, carefully analyzed; (a) Defendant's two patents covering their equipment (JA 524), (b) three engineering articles describing DCA equipment authored by DCA senior engineers (JA 524, 1342-1356), and (c) reviewed

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12. Apparently the Courts below (and possibly DCA) were confused by the subtle, but extremely important, engineering difference between the *slowly changing* square law gain characteristics used in ratio squaring and disclosed in patent '503, and the *instantaneous* square law device system of Peterson, Beverage & Moore, used and abandoned (Exh. P7) by *Kahn's licensee, RCA.* The RCA system did *not* use a separate control path and a "low pass filter" (a device which slows down changes in electric waves) to slow the blending. Thus, noise, which is much faster than signal fades, participated in the squaring, ruining the signal-to-noise gain. *DCA and Kahn's licensees,* followed the '503 patent which discloses a control circuit with a "Low Pass Filter". This is one of the main reasons why RCA failed and later adopted Kahn's teachings, publicly credited Kahn (Exh. P17) and took a license.

various brochures specifying DCA equipment (JA 524). This detailed study convinced Kahn and his patent attorney, March, that there was indeed infringement.

(The Trial Court partially based its harsh finding of bad faith on its understanding of *a document never placed in evidence*, Kahn's deposition (JA 141). Kahn never had an opportunity to inform the Court as to the meaning of that highly technical testimony. This is clear error and a violation of due process.)

In addition, Kahn, prior to commencing the suit, interviewed the Chief Engineer of DCA's major customer, Page-Northrop, (also a Kahn licensee) to insure that there was indeed infringement. *Kahn did not commerce this suit without being certain there was sufficient basis for an infringement charge.*

The Trial Court, while not passing on the question of laches, *made the much more serious finding of bad faith based upon laches.* (Not being an attorney, I was not aware of the concept of laches prior to the instant suit). The following is a summary of the facts, detailed elsewhere. (Kahn Brief to Court of Appeals pp. 61-69)

There was an interval of 3 2/3 years between the time DCA refused Kahn's offer of a license claiming non infringement and the restart of negotiations. Kahn did not charge DCA with infringement in his initial offer, but he later received evidence of infringement from Page/Northrop, a Kahn licensee and a major customer of DCA. Kahn then asked DCA to reconsider their refusal of a license.

During the above mentioned 3 2/3 year interval, Kahn, on advice of counsel, initiated a suit against Western Union (WU). The WU suit was terminated when WU paid for all past infringement and took a license. Deducting the time during which Kahn was pursuing the WU suit, there was a net delay of 2 1/4 years. There was no finding that DCA was prejudiced by the delay. No cases were cited finding laches for such a short delay, *let alone finding bad faith.*

It is now necessary to complete the defense against the charges of bad faith in two related matters. One is the charge of having failed to conduct discovery activities and the second is that Kahn had insufficient evidence of infringement to litigate this suit. Firstly, while believing that discovery is *optional*, (having been so advised by his then attorney just prior to Kahn's replacing him) Kahn now fully agrees that he should have taken advantage of discovery *because it would have helped his case*. And this is why, as soon as he learned that his attorney had delayed discovery so that time ran out, Kahn substituted Mr. McPhee as counsel.

Immediately Mr. McPhee requested a delay in the trial date, but the Trial Court refused any delay whatsoever and did not allow McPhee to explain his sudden substitution, 26 days prior to the 9 day trial. Thus, Kahn was severely damaged by the inaction of his original attorney. But, unless it is bad faith, for a layman not to know the Federal Rules and Practice of discovery, Kahn is free of bad faith. Was DCA damaged because Kahn's case was weakened? If DCA was damaged, they should have joined in a request for delay instead of opposing it. Actually DCA, instead of being damaged by Kahn's lack of discovery, *took maximum advantage of it by introducing surprise testimony* which will be discussed next. Bad tactics may be ascribed to Kahn or rather to his first attorney, but bad faith should not be charged against Kahn.

Your Petitioner has, as noted above, been found to have acted in bad faith, a finding that is most difficult for him to accept. It is necessary for him to provide the Court with facts, fully supported by the record of this ligation, which, while not pleasant in their implication, demonstrates the urgent need for this Court to set guidelines for the Lower Court's use of the term bad faith in patent causes based on complex technology.

Late in the trial Mr. Ferrill, DCA's attorney, while closing his direct examination of Gruber saved the final two

questions to test the accuracy of the key section of DCA's engineering book (manual) covering the 2500 model (post App. A32-A33). These questions afforded Gruber, DCA's Chief Engineer, the opportunity to impeach the very paragraph that proves that DCA used square law control, not the higher law control which both Lower Courts found. (Kahn and his attorney, Mr. McPhee, were *surprised* because they had believed that they had been relieved of proving this decisive point of square law control because, DCA had furnished them the technical book and had formally stipulated and admitted its accuracy. Otherwise, what was the purpose of the book and what was the purpose of the stipulation). Gruber also testified that Mr. Ferrill had instructed him to make measurements of this very control law (JA 964) and this measurement was made by Gruber just before Mr. Ferrill signed the stipulation

Mr. Ferrill should not have signed the stipulation if he truly believed that DCA's equipment did not have a square law characteristic as claimed in their book. He should have warned Mr. McPhee of the situation and he should not have charged *Kahn* with bad faith in this matter.

Due process requires that DCA be bound by their stipulation and that Kahn should be cleared of the charge of bad faith.

Furthermore, and most importantly, did DCA, for a period of 15 years, sell their customers, including the U.S. Government, falsely labeled devices? Or alternatively, did they misrepresent their equipment's characteristics to the Trial Court in order to avoid a finding of infringement? Recognizing the near impossibility of selling engineering oriented customers falsely marked equipment for a 15 year period, and considering DCA's numerous publications written before this suit started, one is forced to conclude that the misrepresentation was made to the Court.

Not only did the Trial Judge accept Gruber's remarkable testimony and find non-infringement, but he found

that *Kahn* had acted in bad faith in pursuing his claim of infringement based upon the formal stipulation Gruber violated.

The Trial Court's acceptance of surprise testimony contradicting a stipulation to destroy Kahn's patent property rights, to find bad faith and to subject him to a *claim of $165,000* in attorney fees, is manifestly unjust.

Considering *each* of the above described findings of bad faith, it would follow that no independent inventor should risk going to Court [13]. He is gambling that, in a few days of adversary proceedings, he can transfer to a Jurist, no matter how brilliant, information which may have taken him decades to understand. And, if he fails, he will not only destroy the fruits of his research, but endanger his fortune and even his good name. The stakes are just too high.

Unless *strict guidelines* as to the interpretation of 35 USC 285 are set, halting the wave of huge fines against inventors, the Courts, for all practical purposes, will be closed to independent inventors.

CONCLUSION

For the foregoing reasons, the Petition for a Writ of Certiorari should be granted.

Respectfully submitted,

LEONARD R. KAHN
Petitioner

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13. Since a patent property right is defined in 35 USC 154 as "... the right to exclude others ...", it follows that, if the inventor is effectively denied access to the Courts, his property is *confiscated*.

UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

No. 981 September Term, 1973

Decided December 10, 1974

Petition for Rehearing
Denied
January 9, 1975

Docket No. 73-2848

LEONARD KAHN,

Plaintiff-Appellant,

-against-

DYNAMICS CORPORATION OF AMERICA

Defendant-Appellee

BEFORE:

Smith and Timbers, CJJ,
and Tyler, DJ.

PER CURIAM:

Petition for rehearing filed by plaintiff-appellant is denied, except to the following extent:

At page 5943 of the slip opinion herein, there appear the following sentences:

> "Kahn's circuit was anticipate by the Oswald patent with one possible distinction, which distinction nonetheless was anticipated by the Ohl patent. Accordingly, the trial court was clearly within the limits of its discretion to determine that the 503 patent was anticipated by the prior art, pursuant to 35 U.S.C. 102."

Although the trial court did make such a finding, 367 F. Supp. 63, at 72, and notwithstanding that the point does nothing to change the ultimate result, we conclude that the above sentences should be deleted and the following language substituted therefor:

> "Consequently, we accept, with a minor qualification, the trial court's finding that Kahn's circuit was anticipated by the Oswald Patent with one possible distinction, which distinction nonetheless was anticipated by the Ohl Patent. See 367 F. Supp. 67, at 72. At first blush, this determination seems contra the general rule that, upon challenge under Section 102, the challenging party must prove that all elements of the invention, or equivalents thereof, are to be found in a preexisting single structure or description. See, e.g. Scaramucci v. Dresser Industries, 427 F. 2d 1309, 1313-14 (10th Cir. 1970). Particularly since Oswald himself proposed the change later embodied in the Ohl Patent, and because Oswald's

> patent in itself disclosed the principle of ratio-squared combining in a diversity system with a method of operation similar to the Kahn disclosures, we think the additional reference to Ohl by the trial court was insubstantial and thus unnecessary to establish the Section 102 defense. Shelco, Inc. v. Dow Chemical Co., 466 F. 2d 613, at 614 (7th Cir. 1972)."

Petition for rehearing denied in all other respects.

Dated: January 9, 1975

(signed)
J. JOSEPH SMITH, Circuit Judge

(signed)
WILLIAM H. TIMBERS, Circuit Judge

(signed)
HAROLD R. TYLER, District Judge

UNITED STATES COURT OF APPEALS

FOR THE SECOND CIRCUIT

No. 981—September Term, 1973.

(Argued May 21, 1974 Decided December 10, 1974.)

Docket No. 73-2848

LEONARD KAHN,

Plaintiff-Appellant,

—against—

DYNAMICS CORPORATION OF AMERICA,

Defendant-Appellee.

Before:

SMITH and TIMBERS, *C.J.J.* and TYLER, *D.J.**

Appeal from an opinion and judgment of the United States District Court for the Southern District of New York, 367 F. Supp. 63 (Tenney, *J.*), holding plaintiff's patent invalid and dismissing the complaint with costs to the defendant, including attorneys' fees, because the case is exceptional within the purview of 35 U.S.C. § 285.

Affirmed and remanded for determination of the amount of attorneys' fees.

LAURENCE B. DODDS, Esq., Great Neck, New York (Joseph R. McPhee, Jr. and George Pollack on the brief), *for the Plaintiff.*

* United States District Judge for the Southern District of New York, sitting by designation.

THOMAS M. FERRILL, JR., ESQ., and ALLEN B. HAZELTINE, ESQ., Blue Bell, Pennsylvania, *Attorneys for Defendant-Appellee.*

TYLER, *D.J.*

Plaintiff Leonard R. Kahn sued Dynamics Corporation of America ("DCA"), charging that certain models of the "REL" radio receiving systems, made and distributed by DCA, infringed Kahn's patent No. 3,030,503 issued on April 17, 1962 (hereinafter the "503 patent"). He appeals from the trial court's denial of his claims and assessment of liability on his part for attorneys' fees. Since we believe there is ample evidence to support the reasoning and judgment of the trial court, we affirm in all respects but remand the case for determination of the exact amount of attorneys' fees to be awarded to defendant.

After the trial, the district court entered judgment on the basis of an opinion holding that the Kahn patent was invalid in view of certain prior art, 35 U.S.C. §§ 102 and 103; holding that the 503 patent was invalid because of Kahn's failure to disclose material facts and because he made material misrepresentations to the Patent Office; determining that claims 15 and 16 of the 503 patent were invalid because they were first asserted in and after August, 1961, more than one year after equipment identical to that charged to infringe had been on sale and distributed to customers; holding that plaintiff had failed to sustain his burden of proving infringement; dismissing the complaint with costs; and determining that, because the case is exceptional within the purview of 35 U.S.C. § 285, defendant is entitled to recover attorneys' fees as part of its costs.

Kahn has asserted that his patent covers all diversity radio receiving systems wherein the outputs of the diver-

sity receiving branches are combined linearly in phase by any circuit which causes the strength of the signal from each branch, at the point where the signals from all branches are combined, to be proportional to the square of the strength of the signal received by the antenna for that branch. The practical core of this patent dispute is that both the 503 patent and the devices manufactured by DCA are intended and designed to overcome the problem known even to laymen as "fading" of radio signals.

As is commonly known, radio signals take many courses in traveling substantial distances from a transmitter to a receiver. While radio signals can, but rarely do, follow the earth's curvature, they usually travel upward away from earth and are refracted back to earth by the ionosphere. Indeed, radio waves may be refracted once, or they may bounce back and forth between the earth and the ionosphere several times before they reach a receiver. Thus, signals intercepted by the receiver system antennae may have traveled over widely different paths of unequal distances.

Radio signals are cyclical in nature; that is, they have crests, or positive phases, and troughs, or negative phases. Therefore, the crest of a portion of a signal traveling on one path may arrive at the same time as the trough of a portion of the same signal traveling on another path. Moreover, the relationship of the phases at the receiver may vary from 0 to 360 degrees, resulting in either a weakening or a strengthening of the signal when the portions are combined. In sum, continuous variations from a full reinforcement (0 degree or 360 degree phase relationship) to complete cancellation (180 degree phase relationship) result in what is called fading.

As the trial court also found, a radio signal does not occupy a single frequency but includes a band or range of

frequencies. Each frequency is affected differently by the refractions from the ionosphere to the earth. As a consequence, the various signals within a frequency band may be affected differently so that the relationship among their strengths at the receiver is not the same as it was at the transmitter. This condition produces what is known as selective fading.

Kahn's 503 patent is intended to reduce these fading problems by making use of a diversity reception system for improving signal strength in relation to noise level. By this method, two or more receivers are simultaneously employed to receive signals transmitted over long distances. After linear amplification and demodulation, the signals are combined in phase and in proportion to the squares of the strengths of the incoming signals. Thus, should the incoming signals have relative amplitudes of three to two, they will be combined in a ratio of nine to four. The subject matter of the 503 patent amounts to a claimed improvement in the field of diversity receiving systems effected by utilizing two or more receivers in combination to overcome the effects of signal fading which may result in a low or virtually negligible signal reception in one or more of the multiple receivers.

The 503 patent was granted to Kahn on April 17, 1962, upon a continuation of Kahn's original application (No. 365,964) which was filed July 3, 1953, but abandoned on December 13, 1960, after continued disallowances by the Patent Office. Accompanying the continuation application was a letter setting forth arguments with respect to the so-called Oswald Patent (No. 2,219,749, issued October 29, 1940). The significance of this letter was that theretofore the Patent Office had consistently concluded that the teaching of the Oswald Patent clearly embraced the Kahn application. Indeed, on June 20, 1961, the continuation applica-

tion of Kahn was again rejected as being substantially met or anticipated by Oswald. Indefatigable, Kahn and his counsel nevertheless filed an amendment in August, 1961, wherein they contended, *inter alia*, that the system described by Oswald could not work because of random phase variations of the signals to be combined. The last contention appears to have been largely responsible for finally persuading the Patent Office to issue a patent. But at trial Judge Tenney found the contention completely lacking in merit because the Oswald patent describes a system which would satisfactorily solve the random phase variation problem. In other words, the trial court accepted the testimony of defendant's experts which established that, by proceeding on the basis of the Oswald patent, a satisfactory diversity system using ratio square combination could be devised without undue difficulties caused by random phase inconsistency. The system contemplated would operate by reconditioning the reduced amplitude carrier of each receiving branch and by introducing each branch's reconditioned carrier into its second detector.

We believe that the testimony at trial amply supports the trial judge's conclusions on the teaching of Oswald and on other prior art in the field. We have little to add to the specific findings and reasoning of the trial court on this and other matters. Nevertheless, some of the evidence at trial and findings of the trial court will be explored to determine whether Kahn misled the Patent Office and proceeded in bad faith in other ways. Such actions would be sufficient to make this an "exceptional case" within the meaning of 35 U.S.C. § 285 and to support the trial judge's exercise of discretion under that statute in awarding attorneys' fees to the defendant.

As Judge Tenney recognized, the presumption of validity of a patent may be strengthened where the Patent Office

has granted it with knowledge of relevant prior art, here most particularly the Oswald Patent. However, that presumption should not attach where there is evidence that the Patent Office has been misled as to the true import of prior art references. Cf. *John Deere Co. v. Graham*, 333 F.2d 529, 530 (8th Cir. 1964), *aff'd*, 383 U.S. 1 (1966). The presumption has also been weakened in recent years by the fact that the Patent Office is too overworked to give adequate attention to patent applications and grants. See *Ansul Company v. Uniroyal, Inc.*, 301 F. Supp. 273, at 280 (S.D.N.Y. 1969), *aff'd in relevant part*, 448 F.2d 872 (2d Cir. 1971), *cert. denied*, 404 U.S. 1018 (1972); cf. *Graham v. John Deere Co.*, 383 U.S. 1, 18 (1966). Here on the basis of persuasive evidence, the trial court found that Kahn made no new contributions to the art but, at best, reworked and republicized information previously developed by others. Indeed, Judge Tenney found that some of the information Kahn used was obtained from publicly available works which he had encountered many years ago while working as an engineer for Crosby Laboratories.

The record clearly indicates that the Oswald Patent contains a full disclosure of the principle of ratio-squared combining in a diversity system. Moreover, the mode of operation and the circuitry described by the Oswald Patent seem to compare closely to those disclosed by the 502 patent. Not surprisingly, therefore, the trial court was impressed by the testimony of DCA's expert Bingley. He prepared a hypothetical circuit which in reality was the Oswald Patent circuit incorporating the change which Oswald himself had proposed and which was disclosed in the Ohl Patent (No. 2,041,855, issued May 26, 1936). Unfortunately for Kahn, there is no evidence that the patent examiner knew of the Ohl Patent or that it was called to his attention by Kahn. Therefore, the presumption of validity accorded a patent granted in light of prior art is

inapplicable. Consequently, we accept the trial court's finding that Kahn's circuit was anticipated by the Oswald Patent with one possible distinction, which distinction nonetheless was anticipated by the Ohl Patent. Accordingly, the trial court was clearly within its limits of discretion to determine that the 503 patent was anticipated by the prior art, pursuant to 35 U.S.C. § 102. We scarcely need add that our review of the record indicates likewise that any differences which might be perceived between the subject matter of the 503 patent and the prior art are such that "the subject matter as a whole would have been obvious at the time the invention was made to a person" such as an electrical engineer like Kahn. 35 U.S.C. § 103.

We also believe that there is ample evidence to support the conclusion of the trial court that claims 15 and 16 of the 503 patent, the only claims as to which Kahn attempted to prove infringement by DCA, are invalid. They were not presented either under the original or the continuation application until more than one year after equipment substantially the same as that charged to infringe had been on sale and delivered to customers. See 35 U.S.C. § 102(b); cf. *Muncie Gearworks Inc.* v. *Outboard Marine & Manufacturing Co.*, 315 U.S. 759 (1942).

Finally, the trial court determined that the DCA systems operate quite differently from the system contemplated by the 503 patent. Diversity receiving systems conforming to the specifications of that patent would combine the signals from each branch in proportion to the squares of their strengths as received, regardless of how greatly the relative strengths of the signals differed. DCA's system or systems do not operate this way; in effect, they are hybrid systems. If the signals in the branches differ in strength by less than two to one, they are combined in proportion to a varying power of the input signal strengths.

When incoming signals of the branches differ in strength by more than two to one, only the signals from the branches having the stronger input contribute to the output; the weaker signal contributions are switched off. As the trial court put it, defendant's systems are both combining and selective. Not surprisingly, therefore, Judge Tenney determined that Kahn's expert witness could not explain "any definitively understood relation between the claims in suit and the disclosure in Kahn's specifications and drawings." For this and other reasons supported by the evidence, we conclude that the trial court was correct in holding that DCA's devices do not infringe the Kahn Patent, most particularly claims 15 and 16 thereof.

We come now to the issue of whether DCA is entitled to an award of reasonable attorneys' fees under 35 U.S.C. § 285. In what is perhaps the leading case in this circuit on this subject, the United States District Court for the Southern District of New York enunciated the rule that "only where the court is convinced that the patent is so wholly devoid of substance that the plaintiff could not have had a bona fide belief in its validity shall it award the defendant reasonable attorneys' fees pursuant" to the statute. *Indiana General Corp.* v. *Krystinel Corp.*, 297 F. Supp. 427, 449 (S.D.N.Y. 1969), *aff'd*, 421 F.2d 1023 (2d Cir.), *cert. denied*, 398 U.S. 928 (1970). Mention has already been made that the trial court, well aware of this principle, made a finding that Kahn had misled the patent examiner with respect to the true nature, scope and capabilities of the method or system disclosed in the Oswald Patent. In addition, the trial court made a finding that Kahn deceived the Patent Office by withholding from it the nature and significance of highly relevant papers, the contents of which were familiar to Kahn as early as the 1930's when he was working for Crosby Laboratories.

Moreover, while the trial court did not pass upon DCA's asserted defense of laches, it did note that in September, 1962, less than six months after his patent had issued, Kahn charged by letter that DCA might be infringing the 503 patent. As a result, DCA's lawyers studied the 503 patent and, in apparent good faith, replied to Kahn's attorneys in November, 1963, that it would seem clear that there was no possible infringement by the devices put out by the REL division of DCA. Apparently, there then followed a considerable period in which there was no communication between the parties and no further charges of infringement on behalf of Kahn. The record indicates, however, that in 1969 defendant had written Kahn's attorneys explaining in greater detail why the REL devices did not infringe the 503 patent. Surprisingly, ten days after that letter, this suit was instituted. However, for the three year period thereafter until trial was reached, plaintiff and his attorneys made absolutely no attempt, through discovery or otherwise, to test and consider the contentions of DCA that there was no infringement.

On the basis of these findings, the trial court inferred that Kahn's purpose in commencing this litigation was to force DCA to obtain a non-exclusive license under the 503 patent by threatening DCA with a suit, the defense of which would entail considerable expenses. Additionally, examination of the discovery materials in the case and of the performance of the plaintiff and his witnesses at trial fortified the trial court's conclusion that Kahn and his lawyers made no meaningful effort to establish just how the REL devices infringed the 503 patent. The trial court also analyzed the specific preparations and arguments of DCA, in particular those used in its pretrial efforts to persuade Kahn that his claims were lacking in merit. It finally concluded that Kahn failed to use reasonable and responsible care in assessing his claims prior

to and during suit and that this suit was commenced and prosecuted in bad faith on the part of plaintiff. Therefore, the trial judge determined that the case was exceptional and justified the award of both costs and attorneys' fees to the defendant. See *Kaehni* v. *Diffraction Co., Inc.*, 342 F. Supp. 523, 535 (D.Md. 1972), *off'd without op.*, 473 F.2d 908 (4th Cir.), *cert. denied*, 414 U.S. 854 (1973).

In patent suits, no less than other types of suits in the federal courts, it is the general rule that awarding attorneys' fees to the prevailing party is not favored absent a specific statute providing therefor. Here we have such a statute, but the relief it provides is not usually granted. The patent suit involved must qualify as an "exceptional" case. It is obvious from the language of 35 U.S.C. § 285 that Congress intended the trial court to exercise its sound discretion in deciding whether a case was sufficiently exceptional to vitiate the normal rule that each party bear his own attorneys' fees.

Fraud on the Patent Office would certainly be enough to make a case exceptional, "[b]ut conduct short of fraud and in excess of simple negligence is also an adequate foundation for deciding that a patent action is exceptional." *Monolith Portland Midwest Co.* v. *Kaiser Aluminum and Chemical Corp.*, 407 F.2d 288, 294 (9th Cir. 1969). The trial court's findings that plaintiff was dilatory, that he had misled the Patent Office, and that he had failed or refused to meet the specific reasoning and arguments of DCA concerning the infringement issue were more than ample to support a finding of conduct "in excess of simple negligence" and a determination of bad faith on the part of plaintiff in commencing and litigating this suit. We agree with the trial judge that such negligence and bad faith are sufficient to justify classifying the case as exceptional and awarding attorneys' fees to

the defendant. We find no errors in the trial court's determinations and no abuse of discretion in its award.

In conclusion, we note that the record does not indicate that the trial court has fixed the exact amount of the attorneys' fees to be awarded to DCA. Hence, we affirm the judgment and order appealed from in all respects but remand the case to the trial court for determination of this amount. Costs of this appeal are awarded to defendant.

Joseph R. McPhee, Jr., Garden City, L.I., N.Y., for plaintiff.

Thomas M. Ferrill, Jr., Blue Bell, Pa., for defendant.

OPINION

TENNEY, District Judge.

This is a suit for the alleged infringement of U.S. Patent No. 3,030,503 granted to plaintiff Kahn, a resident of New York, on April 17, 1962 on a "continuation" of Kahn's original application Serial No. 365,964, which was filed July 3, 1953 and abandoned December 13, 1960 after repeated rejections by the Patent Office. The subject matter of plaintiff's patent is an alleged improvement in the field of diversity receiving systems in which two or more radio receivers are utilized in combination to overcome the effects of signal fading resulting in low or negligible signal reception in one or more of the receivers. Defendant, Dynamics Corporation of America ("Dynamics"), is a New York corporation, having its principal office in New York City.[1] Dynamics, through its Radio Engineering Laboratories ("REL") has been a leading manufacturer and supplier of diversity radio receiving equipment. This court has jurisdiction of this action (28 U.S.C. §

1972 the Referee issued an order staying all litigation against Dynamics. On October 20, 1972 the Referee issued an order vacating, as to the instant case, the stay granted in the August 2 order.

1338 (1970)) and venue is properly laid in this district (28 U.S.C. § 1400 (1970)).

Kahn alleges that claims 15 and 16 of his patent[2] are infringed by the diversity receiving equipment designated as Series Nos. 2300, 2500 and 2600 made and sold commercially by Dynamics.[3] Dynamics contends, after trial of the issues herein to the court, (a) that Kahn has failed to meet his burden of proving infringement; (b) that the Kahn patent is invalid in view of the prior art; (c) that if Kahn's claims (*i. e.*, 15 and 16) could be construed as applicable to Dynamics' diversity receiving systems, said claims would be invalid on the ground of late claiming; and (d) that the Kahn patent is unenforceable against Dynamics because of Kahn's laches.

Before considering Dynamics' defenses to the present action, it is necessary to consider briefly the alleged scope of the Kahn patent. Kahn asserts, in essence, that his patent covers all diversity radio receiving systems in which the outputs of the diversity receiving branches are combined linearly in phase by any circuit which causes their strengths, at the point of combining, to be proportional to the squares of the strengths of the signals picked up by the respective receiving antennas for said signals. Such a system is designed to overcome the problem known as fading. Radio signals, in traveling long distances from the transmitter to a receiver system, may take many paths. While they may, but rarely do, follow the earth's curvature, usually they travel upward away from the earth and are refracted back to the earth by an ionized layer that exists above the earth (the ionosphere). They may be refracted back once, or they may travel back and forth between the earth and the ionosphere many times before they reach the receiver system.

As a result, the signals intercepted by the receiver system antennae may have traveled over widely different paths of unequal distances from the transmitter to the antennae. Since these signals are cyclical in nature, as are all radio frequency signals—*i. e.*, they have crest, or positive and null, or negative portions—the crest of a signal traveling one path may arrive at the same time as the null of the signal traveling another path and, when combined, the positive and negative portions effect complete concellation of each other. Intermediate stages of the relationship of crest and null may result in a weakening of the combined signals or, fortuitously, a major enhancement of the crests arriving at the same time. This continuous variation from a full equivalent to possible cancellation results in the phenomenon known as fading.

Furthermore, radio signal information does not occupy a single frequency but

2. These claims read as follows:

"15. A diversity receiving system adapted to obtain optimum signal-to-noise ratio comprising means for amplifying a pair of received signals in a pair of separate amplifying channels, means for comparing said signals to determine which is the weaker thereof as well as to determine the ratio of the stronger to the weaker signal, means for reducing the weaker signal and its noise during said signal amplification by a factor equal to the ratio of the stronger to the weaker signal, and means for adding the thus altered ratio signals in-phase subsequent to said signal amplification.

16. A diversity receiving system adapted to obtain optimum signal-to-noise ratio comprising means for amplifying a pair of received radiant energy transmissions in a pair of separate amplifying channels, the energy in one of said channels having a stronger signal level than the signal level in the energy of the other of said channels, means responsive to comparable portions of the energies being amplified in said pair of channels for determining the ratio of the stronger to the weaker signal in said pair of channels, means for relatively reducing the gain of the amplifying channel associated with the weaker one of said signals by a factor equal to the determined ratio of stronger to weaker signal, and means for adding the thus altered ratio signals in-phase."

3. It was stipulated that Series 2500 is representative of the Series 2300.

must include a band or range of frequencies, and each frequency is affected differently by the refractions from the ionosphere and the surface of the earth. Consequently, the band of frequencies received at one antenna over one path may not be of equal strength or signal level across the whole frequency band. This produces a fading effect known as selective fading. Kahn's patent is directed to a diversity reception system for improving signal strength in relation to noise level in which two or more receivers are simultaneously employed to receive signals transmitted over substantial distances and in which, after linear amplification and demodulation, the signals are combined in phase according to the rule of the ratio of the square of the incoming signals; *e. g.*, if the incoming signals have relative amplitude of three-to-two they will be combined in the ratio of nine-to-four. No claim is made, nor could it be, that Kahn invented diversity reception or even a diversity reception system in which signals are combined.

With regard to the issue of infringement we must recognize the fundamental principle that an invalid patent cannot be infringed. John Deere Company of Kansas City v. Graham, 333 F. 2d 529, 530 (8th Cir. 1964), aff'd, 383 U.S. 1, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966). We must likewise recognize that a patent is presumed valid and the burden of establishing invalidity rests on the party asserting it. *John Deere Company, supra*, 333 F.2d at 530. However, the presumption of validity is rebuttable, and when substantial evidence attacking the validity of a patent is introduced, the question of whether the patent constitutes an invention is then for the court, and the presumption is weakened if applicable prior art was not considered by the Patent Office. *John Deere Company, supra*, 333 F.2d at 530. Accordingly, we look first to the prior art and then to such disclosures of the prior art as were made to the Patent Office.

As early as 1931, Peterson, Beverage and Moore (engineers with the Radio Corporation of America ("RCA")) had successfully placed in operation a diversity receiving system for trans-Atlantic radiotelephone service which was used for many years for rebroadcasts of programs originating abroad. The RCA engineers described their system in the Proceedings of the Institute of Radio Engineers ("I.R.E.").[4] This system

4. H. O. Peterson, H. H. Beverage, and J. B. Moore, "Diversity Telephone Receiving System of R.C.A. Communications, Inc.", 19 Proceedings of the I.R.E. 562 (1931). Kahn's knowledge of this article appears more than likely. For a period of one year, from mid-1951 to mid-1952 Kahn's then employer, Crosby Laboratories ("Crosby"), carried out an investigation, under a U.S. Army Signal Corps contract, of the relative merits of different kinds of diversity radio receiving systems, wherein some of the different ways of utilizing the varying outputs of the plural radio receiving branches were analyzed and compared. Kahn was a main participant in this project. The first of four reports on this investigation reviewed and described several already known diversity receiving systems. Among these, and at pages 35–37 of said report, was an analysis and summary of the triple-diversity (three-branch) radiotelephone receiving system created and described by RCA engineers Peterson, Beverage and Moore in their article. It was noted in the Crosby report that the ratios of the combining were in accordance with the squares of the ratios at the branch antenna inputs, and, furthermore, the report observed that this was consistent both with what the RCA engineers themselves stated in their I.R.E. paper at page 567 and Terman's summary thereof in his textbook, Radio Engineering 491–92 (1st ed. 1932).
Excerpts from the Crosby report follow:

"In their equipment, the signal detectors are of the square law variety with the plates of the combining detectors connected together. Common automatic gain control is used. *It is pointed out that the signal output is proportional to the square of the received signal intensity.* Therefore, if the stronger signal is twice as strong as the weaker signals, there will be four times as much output derived from the stronger signal.

* * * * *

"*The importance of common automatic gain control operation was recognized in this article.* It was realized that if separate AGC's were used, the receiver

caused to be added together the detected signals, as received and amplified, with a common automatic gain control ("AGC") (sometimes referred to as an automatic volume control ("AVC")) resulting in ratio squaring of the signals. In accordance with the practice prevalent at that time, they used square-law detectors, which are special devices for withdrawing the modulation, or the audio wave, from the modulated wave.

In 1937, Friis and Feldman of Bell Telephone Laboratories ("BTL") described, in a paper,[5] a three-branch diversity receiving system and explained, with mathematical proofs, the signal-to-noise improvement made available by ratio squaring, the combining system they used therein, and concluded that, theoretically, ratio squaring was the maximal combining ratio.

Polkinghorn of BTL analyzed the Peterson, Beverage and Moore paper, and acknowledged the signal-to-noise improvement from ratio squaring, duplicating their work successfully. He also developed a triple-diversity receiving system for a multiple unit steerable antenna ("MUSA") receiving station employing single sideband with reduced carrier, which he described in the Proceedings of the I.R.E.[6] Polkinghorn provided a carrier reconditioner for each branch and successfully used circuits arranged to give ratio-squared operation, rather than equal gain combining, in order to enjoy the resulting improved signal-to-noise performance.

In 1939, patent applications were filed by Polkinghorn and by Oswald, another BTL engineer, for certain versions of ratio-squared diversity receiving systems—applications which issued as patents numbered 2,219,751 and 2,219,749, respectively, on October 29, 1940. In each of these patents, a common AGC is employed. In his patent, Polkinghorn relied on controlled gain amplifiers to inject controllably varied strengths of carrier frequency oscillations into his square-law detectors. Oswald, however, in his patent, did not rely on square-law detectors but used each of his gain-controlling rectifiers to control either an intermediate frequency amplifier stage just ahead of his detector (as Kahn would eventually propose in the patent in suit) or an audio amplifier stage responsive to the detector output. Oswald specified that the gain of his controllable amplifier is varied in proportion to the branch input signal strength. This is the condition which, in the Kahn patent disclosure, and identically in the Oswald patent disclosure, provides ratio squaring. That is, the signal versions as combined in each of these patents (Kahn's patent and the prior Oswald patent) are each proportional to the square of the corresponding antenna input signals.

In 1954, Kahn submitted a letter to the Institute of Radio Engineers recommending ratio squaring, which was published in the Proceedings of the I.R.E.[7] Although, as previously indicated, Kahn must have been aware of the prior work of Peterson, Beverage and Moore in which they had, decades earlier, combined components from their three diversity branches in proportion to the

supplying the weakest carrier would have the greatest gain and therefore the outputs of the component receivers would be almost equal." (Exh. CC at 35–36) (emphasis added)

Furthermore, the third quarterly Crosby report (Exh. DD at 25) noted that the use of ratio-squared combining had been analyzed and reported in the second quarterly Crosby report (not available), and the final report (Exh. EE at 21–30) recorded the comparison experiments conducted with ratio-squared combining, equal-gain combining and certain other modes.

5. H. T. Friis and C. B. Feldman, "A Multiple Unit Steerable Antenna for Short-Wave Reception," 25 Proceedings of the I.R.E. 841 (1937).

6. F. A. Polkinghorn, "A Single-Sideband Musa Receiving System for Commercial Operation on Transatlantic Radiotelephone Circuits," 28 Proceedings of the I.R.E. 137 (1940).

7. Leonard R. Kahn, "Ratio Squarer," 42 Proceedings of the I.R.E. 1704 (1954).

squares of the antenna input signals, he omitted any mention of that fact in his paper. Nor did he make any reference to the fact that each branch of the Peterson, Beverage and Moore diversity system used the then prevalent square-law detector, providing the diversity combining performance gain, with the signal-to-noise ratio improvement of ratio squaring, over a single receiver of similar vintage and similar prevailing detector type. As will be seen, Kahn, who had omitted in his I.R.E. paper any acknowledgment of what the RCA engineers had done long before, also omitted any such acknowledgment to the Patent Office, both initially and throughout the prosecution of his applications.[8] Furthermore, Kahn misrepresented the Oswald patent to the Patent Office examiner in a final, and unsuccessful, attempt to secure his patent.

As has been noted, the presumption of validity which attaches to a patent is weakened if applicable prior art is not considered by the Patent Office. *John Deere Company, supra*, 333 F.2d at 530. Accordingly, we turn to an examination of the prosecution of the patent claim in the Patent Office. On July 3, 1953 Kahn's original application, Serial No. 365,964, was filed. In that application he described and claimed a diversity radio receiving system having at least two branches, with a common AGC system provided to regulate the amplification (gain) of groups of intermediate-frequency amplifier stages in all branches in accordance with the signal strength in the strongest branch. In addition, a separate controlled-gain amplifier was provided in each branch, and so arranged as to have its gain varied in proportion to the signal strength of that branch, with the result that the versions of the demodulated signals as combined were proportional to the squares of the antenna input signal strengths. As indicated *supra*, Kahn did not disclose to the Patent Office his knowledge or the existence of the 1931 paper by Peterson, Beverage and Moore describing RCA's diversity radio receiving system having a common AGC system to regulate the amplification (gain) of groups of intermediate-frequency amplifier stages in all branches in accordance with the signal strength in the strongest branch, the circuits being so arranged that the versions of the demodulated signals as combined were proportional to the squares of the antenna input signal strengths.

On March 19, 1954, and again on November 14, 1956, Kahn's application was rejected as unpatentable over the Oswald Patent No. 2,219,749 granted October 29, 1940. On each occasion it was argued on behalf of Kahn that there was no teaching in Oswald of the specific ratio-squared relationship taught by Kahn. On January 30, 1958 the original application was again rejected for the same reasons and the rejection was made final. On July 30, 1958 both an appeal and an amendment acknowledging an interview with the examiner and arguing against the final rejection were filed to the Patent Office Board of Appeals. This amendment presented a new argument against a rejection based upon the Oswald patent—*i. e.*, that the Oswald patent does not provide for in-phase combination of signals, which Kahn asserted was essential to achievement of results in accordance with his proposal. The amendment was refused entry, and, after the filing of a brief on behalf of Kahn, the examiner's answer, and Kahn's reply, Kahn abandoned the original application and a "continuation" application was filed on December 13, 1960.

A letter accompanied this application urging its allowance, which set forth, in

8. Reference has already been made to Kahn's knowledge of the prior work of the RCA engineers referred to, and among the material upon which he relied before the Patent Office was an article by Dr. Brennan (D. G. Brennan, "Linear Diversity Combining Techniques," 47 Proceedings of the I.R.E. 1075 (1959)) in which Brennan made reference to the Peterson, Beverage and Moore system as probably being the maximal ratio system. Yet Kahn never cited this to the Patent Office.

particular, arguments with respect to the Oswald patent and included a list of publications purporting to demonstrate widespread recognition in the art of Kahn's alleged contribution. On June 20, 1961 the continuation application was likewise rejected as being substantially met by Oswald. Following this rejection, Kahn, and his attorney, presented arguments in support of Kahn's position at an interview with the examiner and the assistant primary examiner. The substance of these arguments was subsequently set forth in an amendment filed on August 18, 1961. One of the contentions made was that the system described by Oswald could not work because of random phase variations of the components to be added, which effect resulted from the use of a single oscillator coupled to Oswald's second detectors of both branches. But such contention ignores the fact that Oswald's patent describes reconditioning the reduced-amplitude carrier of the incoming signal of *each* branch and introducing each branch's reconditioned carrier into its second detector.[9] By so proceeding on the basis of the Oswald patent specification, the random phase problem would be avoided and the system disclosed in that patent, using reconditioned carriers in each of the branches as specifically taught by the patent, would operate as a satisfactory diversity system to effect ratio-square combining without any difficulties due to phase inconsistency.[10] This is borne out by the testimony of defendant's experts Brennan, Mack, and Bingley.

It is well settled that, in considering anticipation by prior art, the entire disclosure in a reference must be evaluated for what it fairly teaches one

9. Page 3. Col. 2, lines 6-29 of the Oswald Patent read as follows:

"If it should be desired to effect a greater degree of frequency stability, this may be done in the manner disclosed in Patent 2,041,855 to R. S. Ohl, issued May 26, 1936. That is, the filtered carrier received from the transmitting station may be reconditioned and then used for obtaining automatic frequency control of the beating oscillator 20 and synchronization of the local carrier oscillator 30. Or, if desired, in accordance with the disclosure of the Ohl patent, the filtered carrier after being reconditioned and amplified may constitute the source of locally applied carrier oscillations in place of the local carrier oscillator 30. As disclosed in the Ohl patent, the reconditioned carrier is supplied for demodulation at substantially constant amplitude regardless of fading in transmission, and therefore, if applied in the present system in substitution of the carrier oscillations generated locally by oscillator 30, the system is susceptible of and requires the same automatic gain control in accordance with the amplitude of the rectified received carrier energy of the corresponding branch that is utilized in the present invention."

10. In addition to having "overlooked" the workable means described in the Oswald specification, Kahn, and/or his attorney, misrepresented the meaning of two selected phrases from the Brennan paper (D. G. Brennan, "Linear Diversity Combining Techniques," 47 Proceedings of the I.R.E. 1075, 1081 (1959)) so as to conceal their real purport when read in context. Brennan, in pointing out that a maximal-ratio diversity system (ratio squarer diversity) "is a definite improvement over either scanning diversity or selection diversity" stated that "[t]his *observation* is essentially due to Kahn," noting however, that it was quite possible that the diversity system discussed by Peterson, Beverage and Moore in the Proceedings of the I.R.E. of April 1931 was actually a *maximal-ratio system*, albeit they referred to it with a connotation of switching. In their interview with the examiners, Kahn, and/or his attorney, according to the Remarks which they submitted, stated, in inviting the attention of the examiner to the Brennan paper, that Brennan had written that this type of system "is essentially due to Kahn." Thus, they attributed to Kahn not merely an observation of the advantages of the maximal ratio system, but the origination of it. Significantly, they continued to avoid calling attention to the Peterson, Beverage and Moore paper. Kahn claims that the Peterson paper was called to the attention of the examiner because Kahn called his attention to an "attack" on Kahn's 1954 letter to the I.R.E. by Moore, a co-author of the Peterson paper, in which "attack" Moore referred to the Peterson paper. However, Kahn did not furnish the examiner with a copy of the Moore "attack". Rather, he furnished only a copy of Kahn's reply, which made no mention of the Peterson paper.

of ordinary skill in the art. In re Mills, 470 F.2d 649, 651 (C.C.P.A.1972); In re Boe, 53 C.C.P.A. 1079, 355 F.2d 961, 965 (1966).

[8] While in general it is true that the presumption of validity of a patent may be strengthened where the Patent Office has granted it in the face of certain prior art—here the Oswald patent—this is not so where the Patent Office has been deceived as to the true significance of a reference. As was stated in Marasco v. Compo Shoe Machinery Corp., 325 F.2d 695, 697 (1st Cir. 1963):

> "It is true that the Patent Examiner cited the Malverdi patent in allowing Marasco's claims, but any presumption of validity to be gathered from that fact has been sufficiently overcome. Also, there is indication that the examiner's judgment may not have been based on evidence completely accurate. We are referring to a letter sent to the examiner by Marasco's attorney informing the examiner that the handle of the 'Ghini' machine was held in operative position only by manpower. The text of the Italian patent, a translation of which was possessed by the plaintiffs, stated the exact opposite."

See also Ansul Company v. Uniroyal, Inc., 301 F.Supp. 273, 280 (S.D.N.Y. 1969), aff'd, 448 F.2d 872 (2d Cir. 1971), cert. denied, 404 U.S. 1018, 92 S. Ct. 680, 30 L.Ed.2d 666 (1972).

[9] It must also be understood that the prior art, even if embodied in the file wrapper and presumably considered by the examiner in the Patent Office, involved only an ex parte presentation, whereas at the trial, defendant Dynamics offered the testimony of several experts which disclosed that the alleged invention was "obvious" to a skilled electrical engineer such as Kahn. Richmond Screw Anchor Co. v. Superior Concrete Accessories, 256 F.2d 232 (2d Cir. 1958). Significantly, neither of plaintiff's expert witnesses contradicted defendant's witnesses although they had considered the prior art in preparing to testify. Indeed, one of plaintiff's experts, Hekimian, admitted he was not familiar with the Oswald patent and "would not care to comment on it."

[10] It is clear that Kahn made no new contribution to the art, but at most republicized what had much earlier been developed and published by others, at least some of which he had encountered in his work for Crosby Laboratories.[11] The subject matter of his patent is fully anticipated by, and certainly obvious, in view of the work of Peterson, Beverage and Moore at RCA as well as the work of Polkinghorn, Oswald, Friis and Feldman at BTL. Kahn's argument that all the prior art material relied upon by defendant, in addition to the Oswald patent, was "indirectly before the Patent Office" is specious. Moreover, the prior art referred to and relied upon by defendant does teach the principle of combining signals in a diversity receiving system in accordance with the ratio square law. They are all valid references against Kahn under 35 U.S.C. § 102 (1970), and in any event under 35 U.S.C. § 103 (1970), even though they employ circuitry different from that employed by Kahn to achieve ratio-squared combining. Furthermore, whether or not they attained ultimate perfection, the circuits, in operation, provided signal-to-noise benefit similar to that asserted by Kahn.

Moreover, the Oswald patent not only contains a full disclosure of the principle of ratio-squared combining in a diversity system, but indeed its mode of operation and the circuitry employed therein are essentially similar to those disclosed by the Kahn patent. The "hypothetical" circuit prepared by defendant's expert Bingley (Def.'s Exh. AA) was, in effect, Oswald's circuit incorporating the change which Oswald had himself proposed as disclosed in the Ohl patent (Patent No. 2,041,855 to R. S. Ohl issued May 26, 1936).[12] There is no evi-

11. See note 4 *supra*.

12. See note 9 *supra*.

dence that the Ohl patent was considered by the examiner or that Kahn called it to his attention. Thus, we have a circuit (Kahn's) anticipated by Oswald with one possible distinction which, however, was also anticipated by another patentee (Ohl). All of the elements of the Kahn circuit were, therefore, anticipated by the prior art. Sensytrol Corp. v. Radio Corporation of America, 190 F.Supp. 121, 125 (S.D.N.Y.), aff'd, 289 F.2d 938 (2d Cir. 1961). The patent in suit is accordingly invalid as anticipated by the prior art under the provisions of 35 U.S.C. § 102 (1970). Moreover, even if not fully anticipated by the prior art, any "differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person" such as Kahn, and, therefore, the patent is accordingly invalid under 35 U.S.C. § 103 (1970).

However, even if the Kahn patent were not invalid under the provisions of 35 U.S.C. §§ 102 and 103, the Court would still be constrained to find for defendant. The only claims of that patent as to which plaintiff attempted to prove infringement are claims 15 and 16. These claims are invalid because no claims of a substantially similar scope were presented to the Patent Office—either in the original patent application filed July 3, 1953 and abandoned December 30, 1960, or in the continuation application as filed December 13, 1960—until more than one year after equipment substantially the same as that charged to infringe had been on sale and delivered to customers. Muncie Gear Works, Inc. v. Outboard Marine & Mfg. Co., 315 U.S. 759, 62 S.Ct. 865, 86 L.Ed. 1171 (1942); Chicopee Mfg. Corp. v. Kendall Co., 288 F.2d 719 (4th Cir.), cert. denied, 368 U.S. 826, 82 S.Ct. 44, 7 L.Ed.2d 29 (1961).

The claims which issued as patent claims 15 and 16 were first introduced by Kahn as application claims 24 and 25 by amendments of the continuation application filed in August and November 1961. Kahn argues that there was no change to the drawings or specifications in the patent except for the addition in a drawing of an insignificant resistor requested by the patent examiner, and, more importantly, that the claims sought on filing were much broader than those obtained on issue. However, it is immaterial to the defense of late claiming whether or not the claims in suit were supported by the application as originally filed. The dispositive question is whether or not they are directed to essentially the same subject matter as claims originally presented. If they are not, but rather are directed to more specific subject matter which has been in public use or on sale more than one year prior to the presentation of these or substantially similar claims in the patent application, then it is immaterial that broad, unpatentable claims were presented in the application as originally filed. The applicability of the late-claiming defense is not dependent on whether the claims in issue are based on new matter added to the disclosure subsequent to the filing of the application, and is not rendered inapplicable because broader claims were present in the application as originally filed. Rather, this defense relies on the fact that the claims are directed to subject matter not essentially the same as that originally claimed in the application, and which indeed may be more specific and limited than those originally presented.

No claims corresponding in scope to claims 15 and 16 of the Kahn patent were presented in the application as originally filed. Diversity receivers of the type charged by Kahn to infringe claims 15 and 16 of his patent had been on sale and delivered to users by defendant Dynamics more than one year before any claims of this scope were presented in either of Kahn's two patent applications. Accordingly, if claims 15 and 16 could be construed to read on defendant's receivers, they would be invalid under *Muncie, supra*, 315 U.S. 759, 62 S.Ct.

865, 86 L.Ed. 1171, and *Chicopee, supra*, 288 F.2d 719.

Mindful of the authoritative suggestion in Sinclair & Carroll Co., Inc. v. Interchemical Corp., 325 U.S. 327, 330, 65 S.Ct. 1143, 89 L.Ed. 1644 (1945), that the District Court in an infringement suit inquire fully into the validity of the patent claimed to be infringed,[13] this Court declined to dismiss the infringement claim at the conclusion of plaintiff's affirmative case and permitted the case to continue so that defendant could attempt to sustain its burden of showing the patent to be invalid and thus noninfringeable. Although, as has been found, the patent and, more specifically, the claims alleged to have been infringed are invalid, the court further finds that even if such invalidity did not exist, no sufficient proof of infringement has been adduced. Indeed, not only did plaintiff fail to sustain his burden of proving infringement, but defendant has proved by a clear preponderance of the evidence that its accused system does not infringe.

As previously explained, the Kahn patent is directed to diversity receiving systems in which versions of signals recovered through plural diversity receiving branches are combined in proportion to the squares of their signal strengths at the branch receiver input connections. The patent contemplates that this combining in such proportions occurs no matter how greatly different are the relative strengths of the signals supplied to the various branches. Defendant's systems do not operate in this manner. They are hybrid systems in which, whenever the signals in the branches differ in strength by less than two-to-one, such signals are combined in a ratio which is a varying exponential power (of the order of the sixth power) of the ratio of the input signal strengths. When the incoming signals of the branches differ in strength by more than a two-to-one ratio, only the signals from the branches having the stronger input contribute to the output, the weaker signal contributions being effectively switched off. In short, *defendant's systems are both combining and selective.*[14]

On his direct examination, plaintiff's expert ineffectually tried, with the benefit of two charts, to show how the clauses of claims 15 and 16 of the Kahn patent could be applied to defendant's receivers. In attempting to construe the claims, he paid no attention to the related prior art, which would be the logical starting point for both construing the claims and for determining Kahn's advance (if any) over the prior art which, in turn, would be used for the purpose of determining the scopes of the claims and considering the question of infringement. Additionally, he completely ignored the relation between the element clauses of the asserted claims and the Kahn specification, contrary to the last paragraph of 35 U.S.C. § 112 (1970).[15]

13. *But see* Harries v. Air King Products Co., 183 F.2d 158, 161-162 (2d Cir. 1950) as to appellate review of both infringement and invalidity.

14. After the initial interest in ratio squaring, combining limited to a narrow range came to be recognized as quite advantageous. After having advised government agencies to call for ratio-squared combining in their specifications for diversity receiving equipment, Mack and his colleagues at MIT's Lincoln Laboratory came to the realization that it is disadvantageous to use ratio squaring when the received signals in the branches differ greatly. *e. g.*, for signal ratios such as ⅓, ¼, ⅕, ⅛ or 1/10. Altman of IT&T, and Mellen of Lincoln Laboratory independently recognized that it would be desirable to use equal-gain combining (rather than ratio-squared combining) for so long as the weaker of the combined signals is not much weaker than ½ the strength of the stronger branch input signal, and to cut off the weaker channel completely when its signal becomes appreciably weaker than ½ the stronger-branch input signal strength.

15. Section 112 provides in pertinent part:

"An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."

Both of claims 15 and 16 recite a plurality of means for performing specified functions. However, plaintiff's expert made no effort to consider these various means clauses in the light of the disclosure of the patent to determine what their proper range of equivalents should be for the purpose of determining infringement.

Plaintiff attempts to invoke the doctrine of equivalents, asserting that even if defendant's accused diversity receiving systems do not literally infringe the claims of the Kahn patent, nevertheless infringement may be found on the basis that those systems perform substantially the same function in substantially the same way and for substantially the same purpose as purportedly defined in the Kahn claims. In support of the application of the doctrine, plaintiff suggests that the accused systems differ from what is defined in his patent claims only in what he contends are minor respects amounting to obvious engineering differences which are not material—namely, (a) that they effect signal control in response to out-of-band noise rather than in response to signal level *per se*, and (b) that they use parallel rather than series combining. However, it is clear that there are even more significant differences between defendant's systems and the subject matter of the Kahn claims. One important distinction is that defendant's systems do not use ratio squaring, the "essence" or "principle" which Kahn has attempted unsuccessfully to appropriate as his own.[16] In order to make out a case for infringement, Kahn would have had to show not only that defendant's receivers do use square-law (*i. e.*, ratio-squared) operation, but also that they use the same kind of means as claimed by him to provide it—a burden which he could not sustain.

In short, plaintiff failed to make out a case of infringement. His expert witness was unable to arrive at any definitively understood relation between the claims in suit and the disclosure in Kahn's specification and drawings. Although the expert acknowledged that since claims 15 and 16 consist exclusively of means claims they are required to be interpreted by reference to the specification,[17] he failed to resolve the relation between the claims' clauses and the specification. In prosecuting his infringement suit, Kahn wishes his patent to be treated as though he had invented ratio-squared combining and, thus, that he should be entitled to a patent monopoly over any conceivable form of receiving system using in any way this approach for enhanced signal-to-noise ratio in diversity reception. However, in attempting to support the validity of his patent he argues for strict construction of his patent and rules out any prior art where the ratio of the inputs are not precisely squared. By his approach to the infringement issue he would have to assert that Peterson et al., Oswald, and Polkinghorn were infringers except for the fact that they long preceded him with their ratio squared combining diversity systems. But "[t]hat which infringes, if later, would anticipate, if earlier." Peters v. Active Mfg. Co., 129 U.S. 530, 537, 9 S.Ct. 389, 392, 32 L.Ed. 738 (1889). "It is hornbook patent law that if a reference would have infringed, if later, it anticipates, if earlier." Ritter v. Rohm & Haas Co., 271 F.Supp. 313, 335 (S.D.N.Y.1967). Therefore, assuming *arguendo*

16. Kahn attempts to refute defendant's contention that its receivers do not use ratio squaring by citing to a pre-trial stipulation, with respect to defendant's accused diversity receiving systems, to the effect that "the way in which the outputs of the different branch receivers are utilized in diversity reception" is as described in the instruction manuals in evidence relating to those systems. He points to selected portions of these manuals, taken out of context, as supporting the conclusion that the accused systems have related essence to what he claims; *e. g.*, he argues that "post-detection optimum ratio band combining" really means ratio squaring, although the evidence does not support such contention.

17. See note 15 *supra*.

the validity of the patent and the particular claims thereof allegedly infringed, it is clear that plaintiff has completely failed to sustain his burden of proving infringement. In view of the foregoing, it is unnecessary to consider the defense of laches raised herein.

Finally, we reach defendant's claim that it is entitled to an award of reasonable attorney's fees under 35 U.S.C. § 285 (1970). As this court has had occasion to state, "only where the court is convinced that the patent is so wholly devoid of substance that the plaintiff could not have had a bona fide belief in its validity shall it award the defendant reasonable attorneys' fees pursuant to 35 U.S.C. § 285." Indiana General Corp. v. Krystinel Corp., 297 F.Supp. 427, 449 (S.D.N.Y.1969), aff'd, 421 F.2d 1023 (2d Cir. 1970), cert. denied, 398 U.S. 928, 90 S.Ct. 1820, 26 L.Ed.2d 91 (1970). As has been shown, plaintiff deceived the Patent Office both as to the highly pertinent Peterson, Beverage and Moore paper with which he had become familiar while working for Crosby Laboratories,[18] and with respect to the true nature and capabilities of the system disclosed in the Oswald patent. He argues, but without conviction, that the Patent Office must have known of the "historic" Peterson et al. paper and that that office could read the Oswald patent as well as he could. But the record does not support his argument that the Patent Office did know of the relevancy of the Peterson et al. paper, and, as has been shown, the Patent Office was misled by plaintiff as to the Oswald patent.

> "A patent applicant's breach of duty to the Patent Office is relevant in determining not only the validity of his patent, but also his good faith in maintaining a subsequent infringement action. An applicant's fraud on the Patent Office is enough standing alone to convert his later infringement action into an exceptional case within the meaning of section 285. But conduct short of fraud and in excess of simple negligence is also an adequate foundation for deciding that a patent action is exceptional." Monolith Portland Midwest Co. v. Kaiser Aluminum and Chemical Corp., 407 F.2d 288, 294 (9th Cir. 1969).

See also Shelco, Inc. v. Dow Chemical Co., 466 F.2d 613, 618 (7th Cir.), cert. denied, 409 U.S. 876, 93 S.Ct. 125, 34 L.Ed.2d 129 (1972); Contour Saws, Inc. v. L. S. Starrett Co., 444 F.2d 1331, 1335 (1st Cir. 1971).

Moreover, while the Court has not found it necessary to pass upon the defense of laches, the facts which have been adduced in support of that defense are relevant to the issue of plaintiff's good faith in bringing this law suit. Less than six months after his patent had issued and in September 1962, Kahn charged that defendant's laboratories (REL) could "raise an infringement question with respect to" the patent now in suit. Thereafter, REL's attorneys made a study of the Kahn patent and, on November 4, 1963, wrote plaintiff's attorneys advising that, for the reasons set forth in that letter, it was clear that there was no possible infringement. Ten days after defendant, on June 16, 1969, had written Kahn's attorneys explaining in greater detail why there was no infringement Kahn instituted the present suit. In the three-year period from that date to the commencement of the trial on June 12, 1972 plaintiff apparently made no efforts, through discovery or otherwise, to ascertain the difference between defendant's systems and the claims of his patent.[19]

18. See note 4 *supra*.

19. Defendant duly proceeded with written interrogatories under Rule 33 of the Federal Rules of Civil Procedure ("FRCP"), motions for production under Rule 34 FRCP, a deposition of plaintiff, and depositions of two elderly witnesses, Peterson and Polkinghorn. From June 1969 to May 1972 (a month before trial) plaintiff took none of the available discovery steps. On May 10, 1972 (more than one year after the date set by the court for completion of all discovery) plaintiff presented defendant with a broad

In the light of the complete inadequacy of plaintiff's case on infringement, the Court can only conclude that plaintiff's purpose in bringing suit was to compel defendant to obtain a non-exclusive license under the patent rather than face the expenses of trial.[20] Plaintiff personally, during the discovery portion of the case, completely failed to make a substantially meaningful showing of grounds for his infringement allegation. Neither in his deposition on oral examination nor in his response to the written interrogatories did plaintiff ever provide definitive identification of a combination of elements in the accused receivers to which he could demonstrate the applicability of the respective clauses of a claim or claims of his patent, element by element. The infringement question in this case is not close enough as to be a matter upon which informed, reasonable counsel or scientifically informed, reasonable men might differ, and plaintiff failed to use reasonable care in assessing his infringement allegation prior to bringing suit. On the other hand, defendant, prior to institution of the suit, informed plaintiff of the differences between its product and the claims allegedly infringed in a futile attempt to avoid costly litigation. In the instant case, therefore, the obvious absence of infringement may be equated with bad faith on plaintiff's part. Kaehni v. Diffraction Co., 342 F.Supp. 523 (D.Md.1972), aff'd without opinion, 473 F.2d 908 (4th Cir. 1973), pet. for cert. filed, 42 U.S.L.W. 3001 (U.S. June 25, 1973) (No. 73–2).

CONCLUSIONS OF LAW

1. The Kahn Patent No. 3,030,503 is invalid under 35 U.S.C. §§ 102 and 103 (1) since it is anticipated by the Oswald Patent No. 2,219,749 showing substantially the same combinations of elements as described in the Kahn patent, and (2) since it is obvious to those skilled in the area in view of the prior art including the Peterson, Beverage and Moore paper;[21] the Terman text "Radio Engineering";[22] the Polkinghorn paper;[23] the Polkinghorn Patent No. 2,219,751; The Friis and Feldman paper;[24] the Oswald Patent No. 2,219,749; and the Ohl Patent No. 2,041,855.

2. The Kahn patent is invalid because of plaintiff's failure to disclose material facts of which it was aware, and its arguments wherein the contents of the Oswald patent and the Brennan paper[25] were materially misrepresented.

3. Claims 15 and 16 of the Kahn patent could not be valid claims of the scope asserted by plaintiff because the subject matter of such claims was first asserted in and after August 1961, more than one year after equipment identical to that charge to infringe had been on sale and had been delivered to customers.

4. The Kahn patent is not infringed by defendant, for the reason, *inter alia*, that an invalid claim cannot be infringed.

5. Plaintiff, in any event, has failed to present evidence competent to sustain its burden of proving infringement.

6. The Kahn patent is not infringed, since the claims of that patent are limited to ratio-squared combining or to such variation of diversity branch receiver amplification as only to square the input signal ratios, where defendant's diversity systems raise their signals to greater

informal request for production of documents and defendant produced several manuals relating to its receiver systems pursuant to this request. These are the manuals upon which plaintiff bases his contention that defendant's receivers employ ratio squaring. (See note 16 *supra*.)

20. While under the circumstances of this case, the fact that certain companies had accepted licenses under the Kahn patent and made certain payments for a short period to Kahn cannot be given weight as tending to support the validity of the patent, that fact is relevant as to Kahn's motive in pursuing the unwarranted infringement claims.

21. See note 4 *supra*.

22. Id.

23. See note 6 *supra*.

24. See note 5 *supra*.

25. See note 8 *supra*.

exponential powers than 2 (the square), and switch off the weaker signal except when the signal strengths are within a ratio of about 2:1.

7. The complaint is dismissed with costs to defendant. Furthermore, this case is exceptional within the purview of 35 U.S.C. § 285 and defendant is entitled to an award of attorneys' fees, to be determined on the basis of evidence to be presented in support thereof.

Submit judgment in conformity herewith on five (5) days' notice within ten (10) days of the filing of this opinion.

U. S. Constitution Article 1, Section 8, Para. 8.

To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

U. S. Constitution, Fifth Amendment.

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of war or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use without just compensation.

§ 102. Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

LAST TWO QUESTIONS OF GRUBER'S DIRECT TESTIMONY (JA 986-987), AND

PERTINENT PARAGRAPH OF FORMAL PRE-TRIAL STIPULATION (Exh. P2, para. 7)

Gruber Direct Testimony:

Q. Would you refer to the next paragraph on this same page No. 4-33 of Exhibit 24?

It says, "With the applied noise ratios between the two extremes previously discussed, different bias voltages are needed to satisfy the approximate square law characteristics of the combiner for best signal to noise combiner output. Because all combiner tube cathodes are connected in parallel, the cutoff bias of each combiner tube is not a function of the negative voltage applied to its grid but of the dc voltage difference existing between the grids of various combiner tubes."

And the question that I want to ask you here is, did you, in your receivers, actually satisfy the approximate square law characteristics of the combiner which were referred to as characteristics for best signal noise combiner output?

A. No.

Q. Is the power that you made use of, so far as you can speak of it as a power or an exponent, as to the relation between the input signal ratio and the ratio where you do the combining a considerably higher exponent or power than square law or even cube law, or even fourth power law?

A. Yes, it is higher.

MR. FERRILL: You may examine.

Stipulation Excerpt:

The way in which the outputs of the different branch receivers are utilized in diversity reception with the series 2500 equipment is as described in the Instruction And Parts List Manual. (Exh. P-2, para. 7)

Dated June 12, 1972

SUPREME COURT, U. S.

IN THE

Supreme Court of the United States

October Term, 1974

No. 74-1016

LEONARD R. KAHN, *Petitioner*

v.

DYNAMICS CORPORATION OF AMERICA,
Respondent

BRIEF FOR RESPONDENT IN OPPOSITION

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

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Dated: March 27, 1975

THE LEGAL INTELLIGENCER, 30 NORTH JUNIPER STREET, PHILA., PA. 19107

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IN THE

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LEONARD R. KAHN, *Petitioner*

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DYNAMICS CORPORATION OF AMERICA,
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BRIEF FOR RESPONDENT IN OPPOSITION

ON PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT.

OPINIONS BELOW

Supplementing the information on page 2 of the Petition, the affirming decision of the United States Court of Appeals for the Second Circuit, as amended January 9, 1975, is reported at 184 U.S.P.Q. 260.[1]

JURISDICTION

Petitioner has correctly stated the basis for jurisdiction.

1. The case has not yet appeared in the Federal Reporter, Second Series.

THE QUESTIONS INVOLVED

Petitioner's statement of the questions involved is hardly appropriate because it intermixes hypothesis and argument with the ultimate questions. In essence, Kahn's Petition questions the correctness of the District Court's adjudication, affirmed by the Court of Appeals, that the '503 patent is neither valid nor infringed and that defendant is *entitled* to reasonable attorney fees in this exceptional case. Subdivisions of this question are the following questions, keyed to the decision of the trial court (reproduced in the Petition at pages A15-A27) and to the affirming opinion of the United States Court of Appeals for the Second Circuit (reproduced in the Petition at pages A4-A14, amended at A1-A3):

1. Was the trial court's finding that the Oswald patent describes a workable system anticipating Kahn's '503 patent claims (A18-A22 & A26) consistent with the evidence as the Court of Appeals concluded (A7-A10)?

2. Was the trial court's finding that the '503 patent is certainly obvious in view of the prior works of Peterson, Beverage and Moore, and Polkinghorn, Oswald, Friis and Feldman (A18-A21) and that Kahn made no new contribution to the art (A21) consistent with the evidence as the Court of Appeals concluded (A9)?

3. Did Kahn practice misrepresentation and concealment and deceive the Patent Office in obtaining his patent as the trial court found (A20, A25) in its findings approved by the court of Appeals (A11 & A13-A14)?

4. Does the evidence support the trial court's conclusion that claims 15 and 16 of the Kahn patent could not be valid claims of the scope asserted by plaintiff-petitioner because the subject matter of such claims was first asserted in and after 1961, more than one year after equipment identical to that charged to infringe had been on sale and delivered to customers (A22-23, A26; also A10)?

5. Does the evidence support the trial court's findings and conclusion that the plaintiff failed to sustain his burden of proving infringement and that the evidence confirmed the absence of infringement. (A23-A26; also A10-A11)?

6. Does a trial court abuse its discretion in holding a patent infringement suit exceptional in the meaning of 35 U.S.C. 285 where the Patent Office was misled by the applicant's misrepresentation and concealment, and the suit on the resultant patent was carried out without any basis for demonstrating the applicability of the claim clauses to the defendant's accused products (A25-A26, also A11-A14)?

CONSTITUTIONAL AND STATUTORY PROVISIONS

Petitioner has accurately reproduced in his appendix several sections of the Patent Law bearing upon this case.

Petitioner has also made reference to certain portions of the Constitution, but no constitutional question has been raised before either the District Court or the Court of Appeals, and Kahn has no basis for raising such a question before this Court *de novo*.

RESPONDENT'S STATEMENT OF THE CASE

Kahn presents a distorted Statement at pages 4-7 of his Petition which necessitates this counter-statement of the case. The apparent objective is to paint a picture of Kahn, himself, having solved a long felt need for improvement of diversity receiving systems by having orginated ratio-squared combining and having established it as the one and only optimum diversity system.

At pages 4-5 of his "Statement", Kahn represents that there were "some 27 years of intensive experimentation" on the best forms of diversity in the period from 1927 to 1953. But what the record shows is that there were a few technical papers and patents scattered through that period, including papers and patents showing recogni-

tion and use by others, long before Kahn, of ratio squared combining in diversity reception for the signal-to-noise benefit.

At page 5 of his "Statement", without any record support, Kahn represents that the project he participated in at Crosby Laboratories was "in competition with M.I.T. and Stanford University." Even if such a "competition" were made out by the evidence, it would not be dispositive of any issue.

At page 5 Kahn further introduces a self-serving new argument as to the merit of changing diversity channel responsiveness slowly — not rapidly.[2]

At page 7 of his "Statement", Kahn alleges that ". . . DCA . . . met with severe problems" in using switching diversity systems, and was then advised by M.I.T. to "follow Kahn's teachings to solve their problem." Kahn repeats this allegation at the top of page 13. This is a gross distortion. DCA had already developed its own distinctly different circuit for utilization of the diversity receiver outputs, a circuit which did not stem from Kahn or M.I.T., and was not beset by any switching problems (JA-886-92; Exh. Y; JA-953-58)[3]

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2. At pages 16-17, in expanding upon this new argument, Kahn suggests that this was so "subtle" as to have escaped notice heretofore. Indeed, petitioner did not make it the basis of contentions before the District Court or the Court of Appeals.

3. References in this brief to the decisions below, the testimony, and the exhibits are as follows:

A———: The designated page of the appendix in the Petition;

JA——: The designated page of the Joint Appendix (5 volumes) before the Court of Appeals; and

Exh. ——: The designated trial exhibit. Exhibits introduced by plaintiff were numbered; those introduced by defendant were lettered. Before the Court of Appeals, in addition to the Joint Appendix Petitioner submitted four binders of "Selected Trial and Deposition Exhibits". In these volumes some of the exhibits introduced at the trial were not reproduced in their entireties (e.g. Exhs. 24, 26, 27, FF and GG) but only selected pages thereof were reproduced.

Petitioner asserts on pages 5-7 of his Statement that his alleged "ratio squaring" invention became "the standard of the industry", that he licensed his patent to RCA, Northrop and Western Union, and that the Defense Department included a requirement for ratio-squaring in its "general specifications for communications equipment". Even aside from the fact that Kahn did not invent ratio-squaring (infra, pp. 6-7), there is no competent evidence to support either the assertion that "ratio-squaring" became the standard of the industry or that the Defense Department has to any substantial and lasting extent required that it be used. While Mack, as a staff member of the MIT Lincoln Laboratory, did for a time advocate the use of ratio-squared combining in diversity receiving equipment being developed for government use, he and his colleagues soon came to recognize its disadvantages, particularly where, in a diversity system, the received signals in the branches may differ greatly (JA 894-99). As to the three "licenses" granted under the patent according to page 6 of the Petition, one (Western Union) was a settlement of a suit brought by Kahn (Petition, p. 19, also JA-532). According to Kahn, the three license and/or settlement agreements averaged only some $40,000—a fraction of the cost involved in maintaining a defense to a suit and any appeals—and Kahn has received no royalty payments since about 1966 (JA-530-33). Limited success in causing parties to take licenses and pay some royalties to obviate (or terminate)

Note 3—*Continued*

Petitioner did not request transmittal of any exhibits or record material. Respondent has requested the Court of Appeals to transmit the Joint Appendix and the four binders of "Selected Trial and Deposition Exhibits". Since the Joint Appendix includes the entire transcript of the trial testimony, it would have been superfluous to transmit the actual trial transcript. However, since Exhs. 24, 26, 27, FF and GG were not reproduced in their entireties in the Exhibit binders, respondent has requested that those exhibits also be transmitted.

the expense of litigation would not even constitute significant evidence of commercial success, much less overcome evidence of the invalidity of a patent.[4]

* * * * *

This suit for alleged infringement (of Claims 15 and 16) of Kahn's patent No. 3,030,503 by certain models of diversity radio receiving systems made and sold by respondent Dynamics Corporation of America (DCA) was commenced by Kahn in June, 1969. He maintains that said '503 patent covers an improved diversity receiving system in which the outputs of a plurality of individual radio receivers are combined in proportion to the squares of the signal strengths at the antennas of the respective receivers, whereby to provide a better signal-to-noise ratio while minimizing the effects of fading of the received signals in the course of transmission to the receivers.

Kahn asserts that this system was invented by him in the 12-month period between mid-1951 and mid-1952 while he was employed as an engineer for Crosby Laboratories engaged in a project for the Army Signal Corps involving the investigation of communication system techniques. Long before that time, the benefits of diversity radio receiving systems to combat fading had been appreciated, and such systems had been in use. Some versions of these systems were arranged to switch off all except the strongest channel receiver ("selection"), while others were arranged for adding together the detected outputs of the receivers ("combining"). Indeed, several of these prior systems proposed and used by others employed ratio-squared combining which Kahn later claimed to have originated. Oswald patent No. 2,219,749, granted October 29, 1940, described a system having

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4. *Ruben Condenser Co. et al. v. Copeland Refrigeration Corp.*, 85 F. 2d 537, 541 (2nd Cir., 1936), *cert. denied*, 300 U.S. 665 (1937); *Technograph Printed Circuits, Ltd. v. Bendix Corp.*, 218 F. Supp. 1, 51-52 (D. Md., 1963), *affirmed per curiam*, 327 F. 2d 497 (4th Cir., 1964), *cert. denied*, 379 U.S. 826 (1964).

the same principal features and the same capabilities as later proposed by Kahn and disclosed in his patent. Thus, as the District Court and the Court of Appeals both recognized, Kahn made no new contribution to the art, but at most republicized what had much earlier been developed and published by others.

As the record in this case shows, Kahn had become familiar with at least some of these prior systems early in his work at Crosby Laboratories in 1951-1952.[5] Despite this fact he applied for a patent on a use of ratio squaring for diversity reception, and he proceeded, by way of a letter published in the Proceedings of the Institute of Radio Engineers, to present ratio-squaring as though he were the first to have recognized its benefit. After 7½ years pendency, Kahn's original patent application was abandoned and replaced by a "continuation" application which was allowed about 1½ years later. Kahn never called the attention of the Patent Office to the prior work of others with which he was familiar; moreover, when the Oswald patent was cited by the Patent Office against his continuation application, he avoided revealing the true significance of this patent in relation to the subject matter of his own patent application, and presented arguments which misled the examiners of his continuation application, after which they allowed that application to become the '503 patent in suit.

As a result of the publication of his letter in the Proceedings of the IRE, Kahn received some acclaim from other workers in the field who mentioned his letter in their own technical publications. Such citation of Kahn's published note about ratio-squared diversity combining does not exempt Kahn from the requirement that

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5. One such prior system of which Kahn specifically was aware was the diversity radiotelephone receiving system described in a 1931 technical paper by Peterson, Beverage and Moore. It was used several years at Riverhead, Long Island, N. Y. for receiving from abroad radiotelephone transmissions which were rebroadcast over NBC (JA-1104).

he himself make a new (unanticipated) and unobvious inventive contribution to the art in order to be entitled to receive a valid patent.

At the trial of the case in the District Court, Kahn was not even able to make out a *prima facie* case of infringement of his patent through the testimony of his expert witness and by reference to instruction manuals for the accused diversity receivers which were made available to him by respondent. Moreover, respondent adduced testimony which confirmed that there was no infringement. In view of these facts, as well as the recognition that Kahn had proceeded by concealment and deception, the patent was held invalid and not infringed, and defendant DCA was awarded attorney fees.

The Court of Appeals took up the findings and conclusions of the trial court, finding the evidence to support its holdings and finding no abuse of discretion in the trial court's award of attorney fees in view of plaintiff's demonstrated bad faith.

ARGUMENT

The Petition Does Not Raise Any Substantial Federal Question for Resolution but Instead Seeks Further Appellate Review of the Facts.

The ultimate objective of Kahn's Petition is to have this Court overturn the concurring decisions below. His Petition seeks a yet further stage of appellate review of the case to attempt to convince this Court that the courts below did not correctly weigh the evidence—that they should have believed Kahn even when the unrealiability of his testimony (and testimony which he had his expert Barber essentially repeat on his behalf) had been demonstrated by the testimony of experts including several eminent authorities on diversity receiving. When Kahn gave his transparent excuses for certain of his acts and representations, he was under the scrutiny of the trial court, just as were the several witnesses called by the defendant. The Court of Appeals did not even advert to the rule of law codified in Rule 52(a), F.R.C.P. that

> "Findings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses."

Indeed, there was no need to invoke this rule because the tenor of the decision of the Court of Appeals (A4-A14 and A1-A3) shows its concurrence that the weight of the evidence supports the trial court's findings and conclusions as well. Under these conditions, it is submitted that the case presented by petitioner fails to show any good and sufficient reason why this Court should grant the Petition and accord Kahn a further appellate review on the merits.

Petitioner has not shown that there is any conflict of decisions on any controlling point, or any substantial Federal question here presented for resolution. Hence, Kahn's Petition boils down to nothing more than a request

for a further review of the case and an attempt to persuade this Court to reverse the decisions of the courts below.

In the remainder of this argument, the principal issues raised by the Petition will be discussed. However, it is not deemed appropriate to burden this Court with all of the many facets of the arguments presented by Petitioner, many of which are believed to be so clearly lacking in merit as not to require specific discussion.

The '503 Patent Is Anticipated And Is Therefore Invalid.

The District Court held that

> "The patent in suit is accordingly invalid as anticipated by the prior art under the provisions of 35 U.S.C. §102 (1970)." (A22).

It further explained that the anticipatory prior art was the Oswald patent 2,219,749 of 1940 (Exh. Z), and specifically the version it described on page 3, column 2 in lines 6-29 as involving the use of the Ohl patent carrier reconditioner (A20, esp. footnote 9; A21-22 and Exh. AA). As the District Court found, this fully anticipates the Kahn circuit (A22) and "would operate as a satisfactory diversity system to effect ratio-square combining without any difficulties due to phase inconsistency", as "borne out by the testimony of defendant's experts Brennan, Mack, and Bingley." (A20).

The Court of Appeals approved and accepted this finding (A9-A10). It supplemented its affirmance of the holding of invalidity on the ground of anticipation when it amended its opinion (A2-A3), pointing out that since the Oswald patent describes the version using the Ohl carrier arrangement, the Oswald patent itself suffices as a complete anticipatory reference.

Petitioner Kahn attacks the observations by the courts below that ". . . there is no evidence that the patent examiner knew of the Ohl patent or that it was called to his attention by Kahn." (Petition, pp. 3, 9-11 and

15).[6] Kahn argues that awareness of the Ohl patent by "the Examiner" is made out by page 145 of Exhibit FF and he alleges that "The Oswald/Ohl combination. . . was fully considered and rejected by the Patent Office" (Petition, p. 10). But as will now be shown, it was not the examiner(s) who examined the Kahn **continuation** application and eventually allowed it to become the Kahn '503 patent who "fully considered" Oswald's version using the Ohl circuit. Furthermore, the examiner(s) who **did** consider that version (i.e. the examiners of the original Kahn application) did not "reject" that version but adhered to the position that it was an anticipation of Kahn's described apparatus (infra, pp. 11-13).

Petitioner fails to point out that after 7½ years of pendency, his original patent application, which was assigned to Patent Office Examining Division 51, was not allowed but was abandoned December 13, 1960, after final rejection by the examiners in that division. Concurrently with that abandonment Kahn filed a continuation application, which was assigned to another examining division (Division 92) and was considered by different examiners. In due course the examiners in **that** division allowed the continuation application and the Kahn patent was granted.

As the Patent Office file of the original application (Exh. FF) shows, that application was repeatedly rejected as unpatentable over the Oswald patent, the third such rejection (of January 30, 1958) having been made final. (Exh. FF, pp. 65-66). It was not until after that final rejection that Kahn for the first time advanced an argument to the effect that the system disclosed by the Oswald patent was subject to the alleged defect that it would not combine the several received signals **in phase** (Exhibit FF, p. 76). This argument was not convincing to the examiners in Division 51—they adhered to the final re-

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6. These references by the courts to the awareness question are at pages A21-A22 and the bottom of page A9 of the Petition.

jection. Kahn then appealed the final rejection to the Patent Office Board of Appeals.

In the Examiner's Answer to Kahn's appeal brief, the Division 51 examiners responded to the aforementioned new argument by pointing out that the alleged defect (lack of in-phase combining) asserted by Kahn to characterize the Oswald patent disclosure would not exist in Oswald's second embodiment (which used the subject matter of the Ohl patent) as described by Oswald on page 3, right column, lines 6-29 of his patent. (Exh. FF. p. 145)[7]

Although Kahn then filed a reply brief in which, *inter alia*, he purported to reply to the observations in the Examiner's Answer regarding Oswald and Ohl, an abandonment of the original Kahn application was filed December 13, 1960 just before Kahn's appeal was to have been heard (January 19, 1961) by the Board of Appeals.

Kahn's continuation application filed December 13, 1960 was accompanied by a letter on behalf of Kahn in which reference was made to the Oswald patent as "the only reference of basic pertinency". However, this letter omitted any mention of the position which had been taken in the aforementioned Examiner's Answer by the examiners of Division 51 with respect to the version described by Oswald on the third page, right column—the version embodying the Ohl patent circuit. Indeed, although the continuation application was initially rejected by the examiners in Division 92 and was subsequently allowed following an interview between Kahn and his attorney and the examiners of Division 92, confirmed in a further amendment (Exh. GG, p. 63), there is nothing in the Patent Office file of the continuation application to show that the Division 92 examiners ever were made aware of the un-

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7. That the Division 51 examiners were correct is borne out by the testimony of Brennan (JA 404), Mack (JA 927) and Bingley (JA 1164-69) and also by the District Court's finding (A 20).

illustrated version disclosed by Oswald with specific reference to the Ohl patent.[8]

From the foregoing it must be concluded that the pertinency of Oswald's version including the Ohl patent subject matter never was called to the attention of **the examiner(s) who allowed the patent.** This is consistent with the conclusions reached by both the trial court and the Court of Appeals. Therefore Kahn's simplistic assertion that "the Examiner was aware of the Ohl patent" affords no justification for Kahn's urging that he should be entitled to yet further appellate review.

Three further contentions made by petitioner in attacking the holdings of the courts below on the question of anticipation are similarly without merit. First he attacks a diagram (Exh. AA) which was prepared by defendant's expert Bingley to assist in explaining the second embodiment of the Oswald patent as being "a *hypothetical circuit*, which was also never tested." (emphasis Kahn's) But, as the trial court recognized the circuit of this diagram "was, in effect, Oswald's circuit incorporating the change which Oswald had himself proposed as disclosed in the Ohl patent" (A.21). Bingley, Brennan and Mack all testified that this described circuit version is an operative circuit for providing ratio-square combining without any phasing problems.[9]

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8. This may have been the result of Kahn's letter accompanying his continuation application having represented that he was there setting forth the prior art relied on in examining the original Kahn application, but having failed to call attention to the version described on the third page of the Oswald patent. In that letter, Kahn acknowledged that he had learned that the assistant examiner who had theretofore been examining the original application was no longer in the Patent Office, and hence Kahn had reason not merely to hope but to be assured that some other assistant examiner would have to proceed with the examination of his continuation application (Exh. GG, pp. 44-45).

9. After it had been established at the trial that the Oswald embodiment described in the right-hand column on page 3 of the specification retains phase coherency equally as would Kahn's disclosure, Kahn retreated to his contention before the trial court that

Next, petitioner refers to six "highly technical" reasons which he advanced in the course of his testimony at the trial as to why the Oswald patent system would be inoperative. But the trial court, which had the advantage of observing Kahn and observing experts Brennan, Mack and Bingley as they testified, found Kahn's self-serving criticisms of the Oswald patent unconvincing; on the other hand, he found worthy of belief the testimony by defendant's experts that the system disclosed by Oswald would operate in the same manner and produce the same results as proposed by Kahn's patent.

Finally, petitioner refers (on page 11) to a "mathematical analysis" which he offered in his briefs both to the trial court and to the Court of Appeals purporting to show that the Oswald system will not produce ratio-square combining, but rather will produce square root combining.[10] Neither the trial court nor the Court of Appeals was persuaded by this specious argument.

Note 9—*Continued*

he looks carefully only at the main embodiment drawing and description in a patent and does not direct his attention fully to the additional embodiments (JA 1282 & 1320-21). But Kahn so testified while under the scrutiny of the trial court, and that court had full opportunity to form its opinion as to any veracity of the self-serving statements, contentions and excuses tendered to the court by Kahn. Considering the brevity of the Oswald patent specification and the fact that it was repeatedly cited as ground for rejection of Kahn's original (abandoned) application as well as the continuation application, it is hard to see how anyone could have believed Kahn's strange excuses even without the District Court's benefit of observing him during the testimony (footnote 10 and related text of District Court's opinion at A20).

10. This "mathematical analysis" argument was based on a highly technical quibble as to use of terms such as "energy" in the Oswald patent. But as admitted by and on behalf of Kahn concerning the Oswald patent (Exh. FF, p. 76),

> ". . . Oswald . . . states that his gain should be varied in proportion to signal strength."

This is the condition which provides ratio-squared combining as Kahn's patent points out (Exh. 1, col. 4, lines 19-34).

The '503 Patent Is Invalid Because of Obviousness.

Not only did the District Court hold the Kahn '503 patent invalid as anticipated by the Oswald patent, but also it held it invalid under 35 U.S.C. §103 as obvious in view of the prior art (A 22; also conclusion of law number 1(2) on A26).

The Court of Appeals, after affirming the holding of invalidity on the ground of anticipation, observed that it "scarcely need add" that any differences which might be perceived between the prior art and the Kahn '503 patent subject matter would be obvious to an electrical engineer like Kahn (A10).

Kahn complains that the courts below both erred in referring to what would have been obvious to "an electrical engineer like Kahn". Kahn also contends that the trial court failed to take into account the level of ordinary skill in the pertinent art.[11] His contention is that he is one of extraordinary ability, quite superior to a person of ordinary skill (Petition, pp. 7-9), and hence not an appropriate standard for comparison. This contention does not withstand scrutiny. The courts below did not base their findings of obviousness upon whether or not the subject matter of the '503 patent would have been obvious to Kahn as an individual. Rather, they expressed their concurrent views that from the evidence the subject matter would be obvious to an electrical engineer, noting further that Kahn himself was an electrical engineer.

Indeed, when Kahn did this work and participated in the reports describing ratio-squared combining in diversity reception (Mid-1951 to Mid-1952, as mentioned in footnote 4 at page A17 of the Petition), he had just received (in 1951) his bachelor's degree in electrical engineering (JA-176). He was in his twenties. Even if his

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11. As to this latter contention, the courts below recognized that the level of ordinary skill in the art to which the patent subject matter pertains is the skill of an electrical engineer.

own background at that time were taken as typical of persons of ordinary skill in the art, his later progression through higher grades of membership in his professional society (IRE/IEEE), the experience he would later gain, and the assignments or tasks he might later undertake would not necessarily negate his having been a more or less representative electrical engineer in 1951-1952 just after his 1951 graduation as an electrical engineer.

For yet another reason, Kahn's criticism of the holdings below that the '503 patent is invalid on the ground of obviousness is specious. The Oswald patent is among the several prior art patents and articles which are the basis for the holding of obviousness. Upon the findings of fact below, the District Court held that the Oswald patent anticipates the '503 patent, and the Court of Appeals affirmed, as aforementioned. Hence, even if Kahn could somehow conjure up an argument that the prior art publications and patents other than the Oswald patent left something to be supplied which might not be found obvious to one of ordinary skill in the art, the contention could not be applicable to those references considered together with the Oswald patent.

For the foregoing reasons, it is submitted that there is no error in the holdings of the lower courts of invalidity on the ground of obviousness.

The '503 Patent Is Invalid Because of Misrepresentation And Failure to Disclose Material Facts.

The trial court held the Kahn patent invalid "because of plaintiff's failure to disclose material facts of which it was aware, and its arguments wherein the contents of the Oswald patent and the Brennan paper were materially misrepresented." (A26; see also A9, A13, A14).

The Court of Appeals recognized that the presumption of validity of a patent "should not attach where there is evidence that the Patent Office has been misled as to the true import of prior art references." (A9). In addition,

it is well established that a patent may be invalidated (at least rendered unenforceable) where material misrepresentations were deliberately made to the Patent Office in the course of its procurement. *Penn Yan Boats Inc. v. Sea Lark Boats, Inc.*, 359 F.Supp. 948 (S.D. Fla. 1972), *aff'd per curiam*, 479 F.2d 1328 (5th Cir., 1973), *cert. denied*, 94 S. Ct. 66 (1973). See also *Monsanto Co. v. Rohm & Haas Co.*, 312 F.Supp. 778 (E.D. Pa. 1970), *aff'd*, 456 F.2d 592, 598-601 (3rd Cir., 1972), *cert. denied*, 407 U.S. 934 (1972), *reh. denied*, 409 U.S. 899 (1972) and *Norton v. Curtiss*, 433 F.2d 779, 793-97 (CCPA 1970).

As hereinbefore pointed out (supra, pp. 11-14), Kahn misled the Patent Office examiners with respect to the true significance of the Oswald patent—particularly with relation to the embodiment described with reference to the Ohl patent at page 3, column 2, lines 6-29 of the Oswald patent.

In addition Kahn failed to call to the attention of the Patent Office a highly pertinent prior art reference of which he was admittedly aware—the Peterson-Beverage-Moore IRE paper (Exh. 13). Kahn seeks to minimize the effect of his failure to call the attention of the Patent Office to the Peterson-Beverage-Moore article on the basis that it was referred to in a footnote to a letter of J. B. Moore published in the proceedings of the IRE (Kahn Dep. Exh. I) which commented on Kahn's letter earlier published in the proceedings of the IRE (Exh. 9) setting forth his ratio-square analysis. However, it is not reasonable to conclude that this would have sufficed to alert the Patent Office as to the significance of the Peterson-Beverage-Moore article, and there is nothing to indicate that the Patent Office examiners did consider the article. Neither of the courts below was impressed by this contention of Kahn's which was made to both of them.

Kahn further asserts, as he did below, that in any event the Peterson-Beverage-Moore article is not relevant to the concept of ratio-square combining in diversity

systems. But this self-serving assertion is opposed to the testimony of highly qualified witnesses Polkinghorn (JA-728 & 768-73), Brennan (JA-330-31) and Mack (JA-901), all of whom testified that the Peterson-Beverage-Moore article was indeed pertinent to ratio-squaring, and Kahn's assertion to the contrary was not accepted by the courts below. In reasserting this contention—that the Peterson-Beverage-Moore article is irrelevant—Kahn now advances a new argument to the effect that the systems disclosed therein would not produce satisfactory ratio-square combining because they operate on an "instantaneous" basis, whereas, according to Kahn, ratio-square combining, in order to be effective, must be done "slowly". This argument was not presented to the courts below.

Moreover, as the District Court observed,

> ". . . Kahn and/or his attorney misrepresented the meaning of two selected phrases from the Brennan paper . . ."

which was published in 1959 in the Proceedings of the IRE (A20, footnote 10; Exh. L, p. 1081; cf. Exh. GG, p. 64). As the District Court noted, this was done "so as to conceal their real purport when read in context." By this device, plaintiff led the Patent Office to believe that the author, Dr. Brennan, had acknowledged that Kahn was the originator of ratio squaring *per se*, whereas Dr. Brennan had credited Kahn only with an **observation** as to such a system and had tended to credit Peterson, Beverage and Moore with having had a maximal ratio system in 1931.

In view of the foregoing, it is submitted that the holdings of the courts below, with respect to Kahn's failure to disclose material facts to the Patent Office and his making of material misrepresentations, are well founded and could not be tendered as valid reasons for further appellate review.

Claims 15 and 16 Could Not Be Valid Claims Of The Scope Petitioner Asserts Because Of Sales More Than One Year Before The Assertion Of Such Subject Matter.

In its third conclusion of law, the District Court held that claims 15 and 16 (the two claims in suit) could not be valid claims of the scope asserted by plaintiff because the subject matter thereof was first asserted in late 1961, more than one year after sales of equipment identical to that charged to infringe (A26). This was more fully explained by the District Court at A22-A23, citing both *Muncie Gear Works, Inc. v. Outboard Marine & Mfg. Corp.*, 315 U.S. 759 (1942) and *Chicopee Manufacturing Corp. v. Kendall Co.*, 288 F. 2d 719 (4th Cir.), cert. denied 368 U.S. 825 (1961).

The Court of Appeals found that there is "ample evidence" to support the above-stated conclusion (A10-A11). On pages 11-12 of his Petition, Kahn attacks this holding, maintaining that (a) so long as there was some broader prior claim in the application, and (b) provided that claims 15 and 16 are supported by the original application, the late claiming doctrine cannot rule out the validity of those claims [no matter how different their subject matter might be from the subject matter which was being claimed up to late 1961]. Not only is Kahn's sweeping proposition contrary to the law, but moreover, Kahn must build this argument on a false premise which he states as follows at page 11:

> "Testimony established that the claims were supported by the original application . . ."

To the contrary, in the course of the testimony, the attempts to show applicability, element by element, of claims 15 and 16 to the Kahn patent disclosure (which is identical to the original application disclosure) did not succeed. Barber, called as an expert by plaintiff, could not do so and no one else did so.

As the District Court found (A24),

> "His [plaintiff's] expert witness was unable to arrive at any definitively understood relation between the claims in suit and the disclosure in Kahn's specification and drawings. Although the expert acknowledged that since claims 15 and 16 consist exclusively of means claims [sic; clauses] they are required to be interpreted by reference to the specification, he failed to resolve the relation between the claims' clauses and the specification."

Thus, the testimony not only did not establish what Kahn here maintains—that the claims in suit were supported by Kahn's application—but it at least tended strongly to establish (if indeed it did not conclusively establish) that these two claims were not so supported.

In footnote 8 at page 12 of his Petition, Kahn asserts that even if the construction of the late claiming doctrine as applied by both of the courts below is correct, the holdings of those courts on this basis cannot be affirmed because they are inconsistent with their concurrent holdings that claims 15 and 16 of the Kahn patent are not infringed and that DCA's system did not operate in the manner taught by Kahn. This contention is without merit. The holdings of the courts below are not predicated on any holding that those claims are **in fact** applicable to equipment sold by DCA. Rather they are holdings that these two claims **"could not be valid claims of the scope asserted by plaintiff"** (Page A26 of the Petition, third conclusion of law, emphasis added).

For the foregoing reasons, Petitioner's argument for a yet further appellate review on this proposition is without merit.

The '503 Patent Is Not Infringed.

The trial court held that the Kahn patent is not infringed for the reasons that (a) an invalid claim cannot be infringed, (b) plaintiff failed to present evidence competent to sustain its burden of proving infringement, and (c)

the claims of the patent are limited to ratio-squared combining or to such variation of diversity branch receiver amplification as only to square the input signal ratios, whereas defendant's diversity systems raise their signals to greater exponential powers than 2 (the square) and switch off the weaker signal at all times except when the signal strengths are within a ratio of about 2:1. (A26-A27). The Court of Appeals affirmed these holdings. (A10-A11).

Despite the fact that the courts below held the Kahn patent not infringed on three separate grounds, petitioner seeks to make it appear that the holdings of non-infringement by the courts below are based solely (or at least primarily) on respondent having adduced evidence not wholly consistent with one or two sentences Kahn selects from certain voluminous instruction manuals produced by respondent concerning DCA's diversity receivers which were charged to infringe the Kahn patent. Kahn draws attention to a stipulation on the first day of the trial that the DCA instruction manuals describe the accused diversity receiving equipments.[12] He urges that Gruber's testimony near the end of the trial is not wholly consistent with the

12. The manual to which Kahn most frequently refers is Exhibit 24. It comprises some 250 pages, including more than 50 diagrams. The stipulation as to that manual could hardly be taken as vouching for correctness of every sentence, much less every word. An illustration of Kahn's strained attempts to capitalize on phrases and even words he selects from this 250 page manual is his reliance (in his footnote 10 on page 15) on the word "extremes" found at the middle of page 4-33 of Exhibit 24. This word was used in reference to the limits of combining, i.e. the 2:1 ratio of received signal strengths. Kahn is not content merely to capitalize on this poorly chosen word "extremes", but goes even further in his footnote No. 10 with the unsupported, self-serving contention that ". . . most system operation (about 90%) is between the 'extreme' modes." Kahn would have the Court overlook Exhibit B, Fig. 263, from which it may be observed that in these "typical records" of three-channel diversity reception, a ratio greater than 2:1 prevails against the weaker channels much more than 10% of the time, such that a weaker channel (or weaker channels) might well be switched out on the order of half the time, or more.

descriptive matter in the manuals—that it tends to contradict a reference in one manual to "approximate square law characteristic . . . for best signal to noise combiner output."[13] Petitioner overlooks the fact that it was the defendant's duty to bring forth the true facts as to the limited-range combining ratio after it had been checked by measurements. It is noteworthy, moreover, that on page 18 of his Petition Kahn alleges that "prior to commencing the suit" he "interviewed the Chief Engineer of DCA's major customer" and made certain as to the character of DCA's receivers. If Kahn had any reason to hope (much less believe) that Gruber's testimony was less than reliable, he undoubtedly would have adduced other testimony in the hope of contradicting it.

In any event, Kahn's present contention ignores the fact that even before respondent introduced any evidence to confirm that its accused receivers do not infringe the Kahn patent, the trial court had already expressly recognized that petitioner had failed to make out a *prima facie* case of infringement.[14]

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13. Gruber testified some 16 days after the commencement of the trial. He testified *inter alia* that he had just recently had measurements performed which (a) confirmed that (as the instruction manuals state) the combining action occurs only when the weaker signals are at least half as strong as the strongest signal (i.e. within 6 db. = 2:1 ratio) and (b) showed that the combining ratio applicable when the signals differ in strength by less than a 2:1 ratio is not the square of the input signal strength ratio but rather a varying higher exponential power, i.e. fourth power and higher (JA 962-63 & 986-87; Exh. II).

14. At the close of petitioner's direct case, respondent moved the trial court to dismiss the complaint on the ground that infringement had not been proved (JA 763). The trial court agreed, but nevertheless did not grant the motion to dismiss, preferring to permit respondent to proceed with the presentation of evidence directed to the proof of invalidity of the Kahn patent and in support of its claim that it was entitled to an award of attorney fees under 35 U.S.C. §285 (JA 937-39; A23). In its decision rendered after completion of the trial, the trial court reaffirmed its conclusion that petitioner had failed to prove infringement, which holding was affirmed by the Court of Appeals.

During his direct case in the trial before the District Court, petitioner, with the aid of the instruction manuals and the testimony of his expert witness Barber, sought to prove infringement of claims 15 and 16 of his patent by respondent's receivers. Each of these claims is directed to a combination of elements, each element being expressed as means for performing a specified function without the recital of structure in support thereof. Hence, the final paragraph of 35 U.S.C. §112 required that reference be made to the Kahn patent to determine what each clause related to, and hence to determine how each element clause must be construed in determining whether or not the claim was infringed.[15]

In his direct case petitioner failed even to establish any definitively understood relation between the claims in suit and the disclosure in his own application (A24). In view of this it is apparent that he could not (and he did not) succeed in establishing applicability of the claims in suit to respondent's diversity receivers (A24). Hence, contrary to what petitioner suggests, the lower courts' holdings of non-infringement on the ground that Kahn failed to make out a *prima facie* case are in no way dependent upon any difference between the testimony later adduced on behalf of respondent and what is contained in the instruction manuals. The fact is that even with the benefit of the entire contents of those manuals, unqualified by any testimony later introduced by respondent, petitioner could not make out a *prima facie* case of infringement.[16]

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15. Title 35 U.S.C. §112 provides in pertinent part:

> "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claims shall be construed to cover the corresponding structure, material or acts described in the specification and equivalents thereof."

16. As the District Court emphasized,

> ". . . assuming *arguendo* the validity of the patent and the particular claims thereof allegedly infringed, it is clear that

In view of the foregoing, it is evident that petitioner's attack on the holdings of the courts below on the issue of infringement is without merit.

The Award of Attorney Fees Was Justified.

There are two bases on which this case was found to be exceptional within the meaning of 35 U.S.C. §285, attorney fees being awarded to defendant.[17] The first of these bases was the conduct of the plaintiff in the procurement of his patent. If that conduct did not constitute fraud on the Patent Office, *per se*, at least it was "in excess of simple negligence" and was "an adequate foundation for deciding that a patent action is exceptional." *Monolith Portland Midwest Co. v. Kaiser Aluminum & Chemical Corp.*, 407 F. 2d 288, 294 (9th Cir., 1969). The second basis for an award of attorney fees was Kahn's failure to use reasonable and responsible care prior to and during the suit to determine whether he was in a position to make out a case of infringement. *Kaehni v. Diffraction Co., Inc.*, 342 F. Supp. 523, 535 (D. Md., 1972), *affirmed* 473 F. 2d 908 (4th Cir.), *cert. denied*, 414 U.S. 854 (1973). The trial court and the appellate court recognized that this case is exceptional on these two grounds and that justice requires an award of attorney fees (A25-A27; A11-A14).

Kahn's argument at page 16 of the Petition that he is excused from his failure to call the 1931 publication of Peterson, Beverage & Moore (Exh. 13) to the attention of the Patent Office is grounded on his italicized self-serving assertion that *"This article is, in fact, not relevant."* This self-serving statement is inconsistent with the testimony

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Note 16——*Continued*

plaintiff has completely failed to sustain his burden of proving infringement." (A24-A25)

17. 35 U.S.C. §285 provides:

"The court in exceptional cases may award reasonable attorney fees to the prevailing party."

of Polkinghorn who found, upon studying that article, that ratio-squared combining yields an improvement in signal-to-noise ratio (JA-768-73). It is also inconsistent with the testimony of Dr. Brennan and Mr. Mack (*supra*, pp. 17-18).[18] The examiners were entitled (and the public was also entitled) to have this matter brought to the attention of the examiners in the Patent Office to let them evaluate its relevance.

Kahn's further argument on pages 9-11 and 15 of the Petition that he did not deceive or mislead the examiner concerning the Oswald patent when he finally induced an examiner [the examiners in Division 92] to allow the [continuation] application is equally specious as has already been shown (*supra*, pp. 7, 11-13 and 16-18).

Furthermore, as the District Court recognized, plaintiff misrepresented to the examiner the meaning of selected phrases carved out of Dr. Brennan's IRE paper written in 1959 (Exh. GG, p. 64; cf. Exh. L, p. 1081) and presented "so as to conceal their real purport when read in context" (Footnote 10 of District Court's opinion at A20). This was to mislead the examiner into believing Dr. Brennan had given Kahn credit not merely for an **"observation"** concerning the benefit of ratio squaring, but for having been (contrary to fact) the **originator** of ratio squaring *per se*. This was part and parcel of Kahn's relentless campaign before the examiners and even before the courts to capitalize upon the references by other writers to his letter published in the Proceedings of the IRE in 1954. But, as the District Court recognized,

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18. The relevance of the 1931 publication (Exh. 13) of Peterson, Beverage and Moore is apparent from the first report rendered by Kahn and his colleagues at Crosby Laboratories in the course of their one-year study and analysis contract with the Government (Exh. CC, pp. 35-36). It is also apparent from Dr. Brennan's comment on the proposition that Peterson, Beverage and Moore may well have had a "maximal-ratio" system albeit discussed in relation to selection diversity (Exh. L, p. 1081).

> "It is clear that Kahn made no new contribution to the art, but at most republicized what had much earlier been developed and published by others, at least some of which he had encountered in his work for Crosby Laboratories." (A21; also footnote 4 of the District Court's opinion at A17-A18)

The Court of Appeals found that this holding was reached by the trial court "on the basis of persuasive evidence" (A8-A9). Since republicizing an already developed system and making calculations and observations as to its merit is not a basis for patentability, it is apparent why Kahn depended on misleading the examiner into the belief that Dr. Brennan had given Kahn credit not merely for a publicizing observation but for originating ratio squaring.

With respect to the failure to recognize that there was no reasonable case for infringement, Kahn centers his argument on the magnitude of the exponential ratio in which the signal components received through the different diversity channels are combined [in the very limited range in which combining occurs] (Petition, pp. 17-21). It is hardly surprising that Kahn finds it necessary to sidestep the question of the relation between the clauses of each of the two claims and the Kahn patent specification, and the further question of the relation between the clauses of these claims, interpreted on the basis of Kahn's disclosure, and the accused apparatus. The District Court dealt fully with this matter (A24; A26). The Court of Appeals likewise noted that it was not surprised that, as the trial court had determined, Kahn's expert witness could not explain any definitively understood relation between the claims in suit and the disclosure in Kahn's description and drawings, much less make a consistent application of the claims to the accused receivers (A11-A13). Hence, as heretofore pointed out (*supra*, pp. 22-23), plaintiff was not able to make out a *prima facie* case of infringement even assuming that ratio-squared combining action was occurring in some part of the defendant's diversity receiver operating range.

The affirmed award of attorney fees on the basis of Kahn's misleading and deceit in obtaining the patent, and his lack of a good-faith basis for commencing the suit and persisting to its trial, is opposed by Kahn's dissective arguments rather than by addressing the overall substance of the holdings. For example, on page 19 Kahn now focuses attention on his new (unsupported) allegation of reasons why plaintiff did not utilize discovery. This is a new argument; it is devoid of record support. Even if the new averment were true, it would not be a basis for overcoming the holdings by the courts below, since the acts of the attorney are those of his client, and in any event plaintiff's not using discovery was only one facet of the broader picture of plaintiff's lack of good faith in obtaining and litigating his patent.

In view of these facts and the above cited *Monolith* and *Kaehni* cases *(supra*, p. 24), it is respectfully submitted that the award of attorney fees was fully supported and involved no abuse of discretion.

The Petition for Certiorari concludes with an impassioned argument, including a call for "halting the [alleged] wave of huge fines against inventors." Kahn makes the dire prediction that inventors could not risk suing on their patents. But a review of the cases shows that the courts, including the trial and appellate courts which rendered the consistent decisions herein, have demonstrated great restraint in bringing to bear on unsuccessful patentees the force of 35 U.S.C. §285. Examples include *Federal Welding Service v. Dioguardi*, 295 F. 2d 882, 888 (2nd Cir., 1961); *Bussemer v. Artwire Creations, Inc.*, 231 F. Supp. 798, 805 (S.D.N.Y., 1964); and *Indiana General Corp. v. Krystinel Corp.*, 297 F. Supp. 427, 449 (S.D.N.Y. (Tenney J.), 1969), *affirmed*, 421 F.2d 1023, 1033-34 (2nd Cir., 1970), *cert. denied* 398 U.S. 928 (1970). A review of the cases demonstrates no "wave of huge fines against inventors". Awards of attorney fees are the exception—not the rule. It would be a miscarriage of justice if despite 35 U.S.C. §285 an award of attorney fees were to be reversed in a case so extraor-

dinary as the present case, especially where the District Court had the significant benefit of observing the witnesses under examination including petitioner Kahn (*Indiana General Corp. v. Krystinel, supra*, 421 F. 2d at 1034) and was convinced that he had not proceeded in good faith.

CONCLUSION

Petitioner has strained to reshape the facts and thereby gain a yet further appellate review of a patent infringement suit wherein the well established law was correctly applied by the courts below as here demonstrated. For the foregoing reasons, the Petition should be denied.

Respectfully submitted,

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March 27, 1975

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IN THE

Supreme Court of the United States

October Term, 1974

No. 74-1016

LEONARD R. KAHN,

Petitioner,

vs.

DYNAMICS CORPORATION OF AMERICA,

Respondent.

REPLY BRIEF FOR PETITIONER

LEONARD R. KAHN
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Petitioner, Acting pro se

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ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

REPLY BRIEF FOR PETITIONER

Introduction

Respondent (DCA) in its Brief in Opposition presents a detailed discussion of the factual aspects of the case and for the most part ignores the essential legal questions raised in the Petition. DCA's Brief might be suitable for a response to a "Brief on the Merits" if Certiorari had been granted, but certainly detailed arguments as to all the technical facts of the case is inappropriate at this point. Therefore, Petitioner (Kahn) will respond mainly to those arguments made by Respondent directed to the basic legal questions presented in the Petition.

DCA states, in the first point of its Argument (Resp. Br. pp. 9-10), that the lower courts' decisions did not raise any serious questions of law requiring review by this Court. But Petitioner disagrees and contends that at least three

substantial legal doctrines, introduced in this case, will drastically change the patent law and will seriously impede new technology if allowed to stand. These new doctrines pertain to Late Claiming, Attorney Fees, and the Standard of Obviousness.

(1) The New Late Claiming Doctrine Invalidating Narrowed Claims.

The existing patent structure would be seriously disrupted by this new doctrine because almost all patents are granted after negotiations in which the Government (the Patent Office) persuades the applicant to narrow his claims. Most claims are allowed only after extensive negotiations and the Patent Office is satisfied that the claims have been sufficiently narrowed to avoid all prior art. The new doctrine requires that all narrowed claims, covering inventions which were in use a year or more prior to the submission of the narrowed claims, be declared invalid. Thus, many patents that have found prompt acceptance by the public would be struck down upsetting stable operation in a number of industries based on such patents and significantly increasing the number of patent cases brought to court.

Furthermore, and most importantly, this new doctrine would seriously delay the introduction of new technology, and *"Pat. Pending" would become an obsolete term.* Certainly, one would be foolhardy to put a product on the market until the patent is granted and one is certain of the scope of the claims. Thus, this new doctrine will not only destroy many important patents *but it will seriously delay the introduction of new technology.* [1]

---

1. DCA attacks Petitioner's statement, "Testimony established that the claims were supported by the original application . . .". (Resp. Br. p. 19) DCA's argument ignores Petitioner's extensive testimony describing his patent '503. (JA 223-249) Furthermore, neither lower court found new matter in Petitioner's '503 patent. DCA did not offer any testimony to show that the claims are not fully supported. Moreover, the trial court did not base the late claim finding on the lack of support of the claims but stated: ". . . it is immaterial to the defense of late claiming whether or not the claims in suit were supported by the applications as originally filed". (A22)

This concern about the practical result of the opinions below is not just that of a disappointed litigant. This case has already received wide comment by patent law specialists. See Appendix A1 where a responsible patent publication has pointed out that:

> "The Second Circuit in its *Kahn* v. *Dynamics Corp. of America* decision has *further obfuscated* the *Muncie Gear* doctrine by invalidating claims that did not correspond to 'claims of a substantially similar scope', a result *which can only cause applicants to proliferate the number of claims they file in order to avoid the irrationality of this type of holding.*" (emphasis added)

(2) The New Standard for the Award of Attorney Fees and its Punitive Effects.

The Second Circuit has, in conflict with a number of other Circuits, found that conduct short of fraud is sufficient to sustain the award of attorney fees. *But more importantly*, the measure of proof required, as established in the instant case, is of such a low standard that almost any act, if shrouded by scientific complexity, may now be twisted by a skillful advocate to obtain the award of attorney fees[2]. If this case is followed by other circuits,

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2. For example, DCA makes an exhaustive argument (Resp. Br. at 7, 11-13, 17, 25) in an attempt to prove that the Examiner who granted patent '503 was unaware of the Ohl patent and that Petitioner acted in bad faith in not citing Ohl. But the Examiner of the original application *cited Ohl to Petitioner* on page 145 of the original file wrapper, Exh. D-FF. If DCA had simply checked with the Patent Office, it would know that the Examiner of a "continuation" application checks the original file wrapper so as to determine whether it is truly a "continuation" and not a "continuation-in-part" (because new matter was added) and to review the early actions in the prosecution before he makes his own additional search.

DCA failed to offer any evidence whatsoever to overcome the presumption that the Examiner followed normal procedures and read the original file wrapper.

But most importantly, Ohl was not only incorporated by reference in the Oswald patent *but was discussed in some detail* in its *three*-page specification. (For an admission as to this fact, see Resp. Br. at 10.) Oswald's three-page specification was the closest art before all '503 Examiners (and in the courts below).

Surely this should dispense with the question of Petitioner's bad faith in hiding Ohl.

most certainly there will be a wave of punitive fines against inventors[3].

Therefore, if attorney fees are going to be awarded in situations like this one, no prudent inventor dare seek the protection of the courts in maintaining his property rights. Even if an inventor is foolish enough to risk bankruptcy to protect his rights, he will find that worldlier financial backers will be unwilling to take such risks. Thus the independent inventor's sources of capital will dry up. This new standard in awarding punitive attorney fees will go a long way toward destroying one of this Nation's major resources, the independent inventor[4].

DCA principally relies on *Monolith Portland Midwest Co.* v. *Kaiser Aluminum and Chemical Corp.*, 407 F. 2d 288 (9th Cir. 1966) (note the strenuous dissent), to support its theory that conduct merely "in excess of simple negligence" is sufficient to make a case "exceptional" and justify an award of attorney fees. But that case is not on the point. The District Court there found four separate fraudulent representations to the Patent Office (*Id.* at 294), some of them "deliberate lies" (*Id.* at 296). The Court of Appeals ruled that the District Court's findings were supported by the record and that the plaintiff's conduct, even if not actually fraudulent, revealed such "calculated recklessness" about the truth that there was a "serious breach of duty to the patent office" (*Id.* at 297).

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3. This is a serious matter. Review of all cases in the U.S. Patent Quarterly for the calendar year 1974 reveals that defendants claimed fraud or bad faith by inventors and their attorneys in the majority of infringement cases reported.

4. In its argument on bad faith DCA makes a major point of the use of the term "observation" by its witness Brennan of MIT (showing the word in bold type on pp. 18, 25). Obviously, DCA does not recognize that the word "observation" is a laudatory term when used in scientific literature and not a derogatory term implying plagiarism. DCA also conveniently ignores Brennan's other publication, Exh. P-8, which cited Kahn seven times in a three-quarter page "Letter-to-the-Editor" of the Proceedings of the Institute of Radio Engineers and ended with, "These applications were of course motivated by the work of Kahn."

Other cases had emphasized the fraudulent nature of claims in order to support attorney fees awards[5].

Certainly, if punitive attorney fees are to be awarded on the basis of activities *short of fraud* the standard of proof required should be no less stringent than that necessary to prove *actual fraud* on the Patent Office. The courts have held that one who seeks to prove fraud on the Patent Office has a most heavy burden:

> "It is easy to make charges of fraud, but the law rightfully insists that before legal rights may be based upon such charges, they must be established by clear and convincing evidence. The burden is on the party making charges of fraud to establish same by clear and definite proof." *Armour & Co.* v. *Wilson & Co.*, 274 F. 2d 143 (CA 7, 1960)

The Ninth Circuit has agreed:

> "The road to the Patent Office is so tortuous and patent litigation is usually so complex, that 'knowing and willful fraud' ... can mean no less than clear, convincing proof of intentional fraud involving affirmative dishonesty, 'a deliberately planned and carefully executed scheme to defraud*** the Patent Office.' *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U.S. 238, 245." *Cataphote* v. *DeSoto Chemical*, (CA 9, 1971) 450 F. 2d 769.

Your Petitioner contends that at the very least the same strict standards for proof of fraud on the Patent Office should apply to putative actions short of fraud which

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5. For example, in *California Car Wash Systems Inc.*, v. *Danco*, 348 F. Supp. 958 (D Colo., 1972) the court denied attorney fees even though the patentee failed to bring the closest art, which clearly anticipated and was known to the patentee, to the attention of the examiner.

endanger the fortune and good name of the independent inventor[6].

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6. The standard of proof should be especially strict in high technology cases where skillful patent trial counsel can readily create confusion by the use of highly specialized terminology. In the instant case the courts below, and even some of the scientifically trained witnesses, were confused by the similar sounding terms "square law diversity" and "ratio square diversity".

One reason for the confusion is that Respondent constantly interchanged the use of these two terms. As an example of this Pavlovian style conditioning, DCA posed the following question to Mr. Polkinghorn:

"Why did you consider *square law operation or ratio squared* preferable to . . ." (emphasis added) (JA 773)

Mr. Polkinghorn at the end of his testimony stated:

". . I don't recall using ratio squarer term, but square law detector idea is . . . as old as I am." (JA 851)

even though he had used the term just shortly before in his testimony.

DCA's witness, Mack, testified he would be fired if he used *square law diversity* yet he claimed credit for convincing the Air Force to adopt Kahn's *ratio square diversity. Thus, these almost identical terms have completely different meanings.*

Also, Petitioner in his "ratio square" patent specifically warned against the use of fast acting devices such as "square law" effect circuits stating:

> "If one were to adjust the . . . amplifier time constants faster, . . . a *square law effect, which would be undesirable* . . . and would tend to nullify signal-to-noise ratio gains . . ." (Kahn's '503, col. 6) (emphasis added)

Every piece of prior art cited by DCA uses instantaneous "square law" devices with the sole exception of Oswald/Ohl which was before the Patent Office where such confusion would be treated with contempt.

Nevertheless, DCA persists in invoking instantaneous "square law diversity" systems such as Kahn's licensee RCA's system (Peterson, Beverage & Moore) in an attempt to prove Petitioner's bad faith. DCA not only attempts to use the same semantic confusion here, but conveniently ignores the fact the Petitioner cited Moore's publication describing his early "square law diversity" work with Peterson and Beverage on three separate occasions to the Patent Office. And still DCA has the temerity to claim Petitioner was hiding the Peterson, Beverage & Moore system just as it claimed that Petitioner hid Ohl from the Patent Office. (See footnote 2)

Thus, due to a confusion between two similar sounding terms a gross miscarriage of justice has resulted, even to the point of subjecting Petitioner to a huge claim of attorney fees. Even absent the three serious problems of law discussed herein, in the interest of equity and justice Certiorari should be granted to rectify the injustice caused by this carefully executed scheme to confuse the Courts.

(3) The New Standard of Obviousness

The courts below found that patent '503 was obvious. Petitioner contends that this finding is in direct conflict with the evidence[7]. But more importantly, the procedures followed by the courts below require review by this Court.

The Second Circuit has, in complete disregard of *Graham* v. *Deere* and of 35 USC 103, ignored the requirement of determining the level of "ordinary skill" and used the Patentee as the standard of obviousness. *But the only type of invention that is not "obvious" to its inventor is one*

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7. In the instant case there is a unique opportunity to see the effect of "hindsight" in the determination of obviousness. Mr. Polkinghorn, who was called to testify by DCA in this case, was employed as a Senior Scientist at Bell Labs for some 35 years. While in charge of their Diversity Research program, he reported to Oswald (JA 787) and worked with Ohl (JA 815). Mr. Polkinghorn had a number of inventions, including a diversity patent cited here, (Exh. P-6) This patent was issued on the same day as the Oswald patent, was cross referenced by Oswald, *and used almost word for word the same paragraph citing Ohl.* He therefore had intimate knowledge of the Oswald/Ohl system. (*It is especially noteworthy that DCA did not use one word of Polkinghorn's testimony in its Oswald/Ohl anticipation argument.*) Polkinghorn also had intimate knowledge of all of the other Bell Labs' diversity work cited in this case. Furthermore, Polkinghorn actually built a model of the RCA system. (JA 768-77) *Mr. Polkinghorn had intimate knowledge of every single piece of cited art.*

Certainly this must be a rare situation where we find a highly skilled inventor and scientist , far beyond one of ordinary skill, in charge of research in the pertinent art at this Nation's most prestigious laboratory and fully aware of all cited prior art. Yet, Mr. Polkinghorn, in the penultimate paragraph of his classic paper (Exh. D-C p. 170) describing Bell Labs diversity techniques and his attempts at combining diversity signals, stated that the Bell Labs combiner "... does not seem to have any advantage over the use of ..." the conventional switching (selector) system. Mr. Polkinghorn failed to find *any method* for combining diversity signals that worked better than the switching system. Certainly ratio squaring, the optimum combining method, was not obvious to him. *What better proof can be offered for non-obviousness!*

It is noteworthy that in November 1971, only a few months prior to the trial, another noted *Bell Labs* researcher, Dr. Jakes, stated in a paper describing ratio squaring, there called "maximal ratio combining", (See Petition, p. 14) that:

> "Maximal Ratio Combining Diversity: In this method, first proposed by Kahn ..." (Exh. P-14, p. 82).

which the inventor stumbles onto by accident. All other inventions are obvious to their creators, as they soon become obvious to their colleagues and even to laymen. Once you strip away the language barrier and bring a person to the point where he has the background to consider the invention and *allow hindsight to become a factor*, all inventions become as simple as the rules of arithmetic (which took the ancients thousands of years to develop[8]).

Such a standard of obviousness *would invalidate all patented inventions created by reason rather than by chance* [9].

No matter how one regards the lower courts' standard of obviousness, there can be no question that the trial court failed to make a factual inquiry or finding of the level of "ordinary skill". Mr. Justice Douglas in *Anderson's Black Rock* v. *Pavement Salvage*, 396 US 57 (1969), clearly enunciated on behalf of the Court the importance of following the procedures prescribed by this Court in ascertaining obviousness. Justice Douglas, quoting from *Graham* v. *Deere*, 383 US 1 (1965), stated:

> "Obviousness, as an issue, is resolved as follows:
>
> 'Under §103, the scope and content of the prior art are to be determined; differences between the

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8. A few years ago Petitioner taught the elements of Set Theory to candidates for the Ph.D. degree in Electrical Engineering and today he finds that the same material, as part of the "new math", is being taught to 8 year old children who accept it with little difficulty. Most of the children by the ripe old age of 10 will consider the subject "obvious".

9. DCA attempts to justify the use of Kahn, *the patentee*, as the standard of ordinary skill because "He (Kahn) was in his twenties" when he made the invention. But by the time Kahn invented ratio square diversity he had already made seven other inventions, *two of which were on "switching" diversity systems*, and had authored two engineering papers which were later published in major professional journals and one of these papers introduced a *new type of mathematical analysis of diversity systems*. (Exh. D-EE later published as Exh. J Kahn's Deposition)

> prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.' *Ibid.*
>
> We admonished that 'strick observance' of those requirements is necessary." (*Id* at 62)

The Trial Court never resolved the "level of ordinary skill in the pertinent art" and the Court of Appeals did not even comment on the failure.

Thus, by failing to follow this Court's careful thought-out logical procedures the courts below found the invention obvious, even though the best research minds in the art failed to solve the important problem and leading engineers throughout the World credited Petitioner with the invention.

Published Comments on *Kahn* v. *DCA*

DCA has given sufficient reason in their Brief in Opposition for the Court to question whether Kahn is all alone in worrying about his case and the natural results flowing from these three New Doctrines. Petitioner has furnished, in the Appendix, excerpts of comments that have already been published in Patent Law Journals. He believes that a mere reading of the headlines of these articles will establish the reality of Petitioner's fears summarized below.

Summary

As is pointed out in the Introduction, Respondent's Brief is an inappropriate reply to a Petition for a Writ of Certiorari. Petitioner has therefore, in the above reply, ignored numerous technical misstatements and erroneous

arguments (such as its defense of the lower courts ignoring the formal pretrial stipulation [10]) and has stressed answers to arguments dealing with the importance of the three new doctrines and their deleterious effects; namely:

a) Introduction of new technology will be delayed, and public and private costs of examining patents will be grossly inflated, (Late Claiming)

b) Determination of obviousness by the courts will once more become a difficult and illogical procedure, (Standard of Obviousness) and

c) The independent inventor, as an important element in the development of new technology, will become, for all practical purposes, extinct. (Award of Punitive Attorney Fees)

Conclusion

For the reasons set out here and in my initial Brief, the Petition for a Writ of Certiorari should be granted.

Respectfully submitted,

Leonard R. Kahn
Petitioner

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10. The stipulation looms large in the case because DCA's stipulated manual contains complete proof of infringement. (See Plaintiff's Reply Br. to the District Court for a thorough reading of Claim 15 by use of a stipulated manual, Exh. P-24.) DCA makes the lame excuse that because of the length of its manual,

> "The stipulation as to that manual could hardly be taken as vouching for correctness of every sentence, much less every word." (Resp. Br. at 21 Footnote)

and therefore it should not be held responsible for the stipulation. But DCA knew, when it signed the stipulation, that out of the 250 pages of its manual only 14 pages discussed diversity operation and out of those only four pages provided details as to how the (in the words of the stipulation) "receivers are utilized in diversity". *And these four pages clearly support the charge of infringement.*

DCA's violation of the stipulation late in the trial effectively destroyed Petitioner's case on infringement in the lower courts and subjected him to a serious charge of bad faith. *And now DCA pleads that it not be held accountable for its stipulation.*

APPENDIX

1974 DEVELOPMENTS

PATENT LAW PERSPECTIVES

Matthew Bender, New York

- The Second Circuit in its *Kahn* v. *Dynamics Corp of America* decision has further obfuscated the *Muncie Gear* doctrine by invalidating claims that did not correspond to "claims of a substantially similar scope," a result which can only cause applicants to proliferate the number of claims they file in order to avoid the irrationality of this type of holding, see §A.7.

* * *

§ A.7 Late Claiming and New Matter

As if it were not already difficult enough to sustain a patent in the Second Circuit, the New York district court in *Kahn* v. *Dynamics Corp. of America* [7] has unnecessarily and improperly added to the patentee's woes by imposing a further gloss [8] on the already over-polished *Muncie Gear* doctrine. [9] In *Kahn*, the court held invalid claims

7. — F. Supp. — 180 U.S.P.Q. 247 (S.D.N.Y. 1973).

8. While the Ninth Circuit sustained a patent claim against a *Muncie Gear* attack in *Pursche* v. *Atlas Scraper & Engineering Co.*, 300 F. 2d 467, 132 U.S.P.Q. 104 (9th Cir. 1961) only after determining that the *scope* of the claims in the originally filed application "extended to and included the matter covered" in the claim (132 U.S. P.Q. at 112), the court did not regard scope as a *necessary* but only as a *sufficient* condition and, in fact, discussed *Muncie Gear* in a "new matter" context.

9. *Muncie Gear Works, Inc.* v. *Outboard, Marine & Mfg. Co.*, 315 U.S. 759, 53 U.S.P.Q. 1 (1942). For varying views on *Muncie Gear*, see the discussions of that case in §A.7 of earlier Annual Reviews and Developments as well as Gardner, "Late Claiming," 9 IDEA 321 (1965), and Flocks & Neimark "Is There A Viable Doctrine of Non-Statutory Late Claiming as a Defense in Patent Litigation?", 50 J. Pat. Off. Soc'y 676 (1968).

introduced by amendment more than one year after sale by the defendant of the allegedly infringing devices, on the ground that they did not correspond to "claims of a substantially similar scope" to filed before or within the one year period. [11]

It may be that reasonable policy arguments can be advanced to support the views of those who feel *Muncie Gear* should not be restricted to classic new matter situations, but the *Kahn* view has no redeeming social virtues even if one indulges this view. Because it is impossible to anticipate fully the position an examiner will take or the art he will choose to apply against the claims, one can *attempt* to avoid the pitfalls of a holding such as this only by proliferating originally filed claims unnecessarily as a hedge against the unforeseen. Even assuming the effectiveness of such an approach, it could only serve to increase the private and public costs of patent issuance without any apparent benefits in either sector.

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10. The claims were actually *narrower* than originally submitted claims.

11. 180 U.S.P.Q. at 253. The court added:

> "The applicability of the late-claiming defense is not dependent on whether the claims in issue are based on new matter added to the disclosure subsequent to the filing of the application, and is not rendered inapplicable because broader claims were present in the application as originally filed. Rather, this defense relies on the fact that the claims are directed to subject matter not essentially the same as that originally claimed in the application, and which indeed may be more specific and limited than those originally presented." *Id.*

BNA's
PATENT, TRADEMARK & COPYRIGHT JOURNAL

Number 158

HIGHLIGHTS

Dann Nominated To Be Commissioner: Curtis Marshall Dann has been nominated to be Commissioner of Patents to succeed Robert Gottschalk. Dann, Past President of APLA, is Chairman of DuPont Company's Patent Board.
. . . page A-2

APLA Patent Bill Would Illuminate Patent-Antitrust Interface: Bill drafted by American Patent Law Association has been introduced in House. Proposed legislation differs markedly from Administration's bill (S. 2504) and is noteworthy for its reintroduction of provisions akin to "Scott Amendments". Association's President voices fear that S. 2504 will materially increase cost of applying for patent.
. . . page A-1

Narrowed Claims Are Invalid For Late Claiming: Narrowed patent claims first presented more than one year after subject matter was on sale are foreclosed by doctrine of late claiming. It is immaterial that claims were fully supported in specification as filed since they are not directed to essentially same subject matter as claims originally presented.
. . . page A-2

(emphasis added)

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Number 158 NEWS & COMMENT

NARROWED CLAIMS ARE INVALID FOR LATE CLAIMING

Narrowed patent claims first presented more than one year after subject matter was on sale are foreclosed by the doctrine of late claiming. It is immaterial, the U.S. District Court for Southern New York deciares, whether or not the claims were fully supported in the specification as filed since they are not directed to essentially the same subject matter as claims originally presented. (*Kahn* v. *Dynamics Corp. of America*, 9/14/73)

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BNA's
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Number 209

NEWS & COMMENT

CA2 SUSTAINS AWARD OF ATTORNEYS' FEES FOR CONDUCT SHORT OF FRAUD

Without hesitation, the U.S. Court of Appeals for the Second Circuit declares that "conduct short of fraud [but] in excess of simple negligence" can make a case "exceptional" for purposes of an award of attorneys' fees under 35 U.S.C. 285, (*Kahn* v. *Dynamics Corp. of America*, 12/10/74)

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